SONY

Compact Conference Package

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

PCSP-150P

PCS-1500/1500P

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Owner's Record

The model and the serial numbers are located at the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. PCS-1500/1500P
Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

For the customers in the USA

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart B of Part 15 of FCC Rules.

IMPORTANT INSTRUCTION TO USERS

1. This equipment complies with Part 68 of the FCC Rules. On the bottom of this equipment is a label that contains, among other information, the FCC registration number for this equipment. If requested, this information must be provided to the telephone company.

2. If this terminal equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

3. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

4. If trouble is experienced with this equipment for repair or warranty information, please contact Sony Business Information Center ☎ 1-800-686-7669. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect this equipment until the problem is resolved.

5. This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

For the Customers in the United Kingdom

APPROVAL NOTICE

Compact processor PCS-P150P is approved for connection to PSTN using basic rate access interface compatible with CCITT I.420 (ISDN).

The BABT approval number for PCS-P150P is BABT/609669.

This manual focuses on using ISDN lines to conduct a videoconference, but it also covers non-ISDN lines. If you use ISDN lines, consult your Sony dealer for more information.
- The ISDN service may not be available in some areas.

Voor de klanten in Nederland

Bij dit product zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document (s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

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Precautions

On Safety

Power supply

- Before operating the Compact Conference Package, make sure the operating voltage of the unit is identical with that of your local power supply. The Remote Commander operates on two size AA (R6) alkaline batteries.
- Do not unnaturally bend or crimp the power cord, and do not place heavy objects on it. Damage to the cord may result in fire or electric shock.
- To remove the power cord from an AC outlet, pull out the plug. (Do not pull out the cord itself.)

Do not disassemble the system

Do not open or disassemble the cabinets of the system. Electric shock may result if you touch the inside of the cabinets.

Do not put foreign objects into the system

Avoid having metallic or flammable object, liquid, or foreign matters fall into the cabinets of the system. Otherwise a malfunction may result.

In case of trouble

In case of trouble such as smoke, odd smell, or noise, turn off all units of the system. Disconnect all the power cords and connecting cords. Then contact the place of purchase or an authorized Sony representative.

ISDN

Never install telephone wiring during a lightning storm.
Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
Use caution when installing or modifying telephone lines.
Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
Do not use the telephone to report a gas leak in the vicinity of the leak.

On Handling

Installation/storage

Do not expose the system to:

- Extremely low or high temperatures.
- Damp or dusty room.
- Strong vibration.
- Near devices which generate strong magnetic fields.
- Near devices (such as radios) which transmit strong radio wave.
- Noisy place.

Cleaning

Wipe the cabinets and panels with a dry and soft cloth. If the stain is serious, slightly moisten the cloth with mild detergent. Afterward, use a dry cloth to wipe it. Do not use solvents such as thinner, benzine, alcohol, as they may damage the finish of the cabinets.

Chapter 1

Preparation

Features

The PCS-1500/1500P Compact Conference Package can connect a remote party via an ISDN (Integrated Services Digital Network) line[1]. It sends and receives images and sound, allowing you to have virtual face-to-face meetings with people in other cities or countries.
The system accommodates up to three participants in one location. However, you can add the optional PCS-A300 Microphones for additional participants.
If you upgrade the Compact Conference Package using the PCS-UC150 Upgrade Kit, you can use the Compact Conference Package as the MCU (Multipoint Control Unit) to hold a point to multi-point meeting among four terminals.

1) You can install an optional interface board for connection with V.35 interface, with 6B channels, or on a LAN.

International standards

The PCS-1500/1500P Compact Conference Package complies with ITU-T Recommendations, for easy connection with remote parties overseas. (ITU-T Recommendations have been defined by WTSC (former CCITT).)
WTSC: World Telecommunications Standardization Committee
ITU: International Telecommunication Union

Features

Light weight and small size

The Compact Processor has come to miniaturized to 2.5 kg (5 lb 8 oz) of mass, and it has a small size (258 × 55 × 206 mm; 10 1/4 × 2 1/4 × 8 1/8 inches), you can easily install the Compact Processor on your TV monitor.

Simple setup

The Compact Conference Package has the integral-type camera and microphone. You do not have to do a complicated connection; simply connect the TV monitor and the ISDN modular cable.

Guide menu

The guide menu appears on the lower part of the monitor for guidance. When you turn on the Compact Processor for the first time, the ISDN Configuration (COUNTRY) menu appears on the monitor screen. Set up the menu under its guidance.

The Remote Commander can operate a Sony TV monitor

You can operate a Sony TV monitor with the Remote Commander supplied with the Compact Conference Package.

Automatic tracking function

In addition to pan/tilt action, the automatic target tracking feature allows you to track a subject having the memorized color and brightness automatically.

Echo canceler

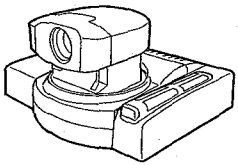
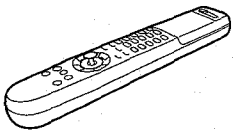
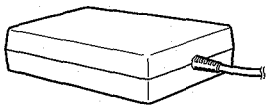
A built-in echo canceler decreases sound echo from walls in the meeting room, allowing for clear sound reproduction.

System Configuration

The PCS-1500/1500P Compact Conference Package is a basic system that can be enhanced with variety of optional equipment.

Basic System Equipment

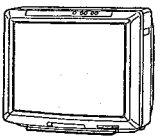
The PCS-1500/1500P Compact Conference Package forms the basis of the PCS-1500 series system.
The PCS-1500/1500P Compact Conference Package consists of the following units:

Unit	Description
PCS-P150/P150P Compact Processor PCS-C150/C150P Camera 	Contains the video codec, audio codec, echo canceler, network interfaces and system controller. This unit has an integral-type camera and microphone.
PCS-R150 Remote Commander 	Controls the Compact Processor. This can also be used to operate a Sony TV monitor.
PCS-AC15 AC adaptor 	Provides the power supply to the Compact Processor.

Options

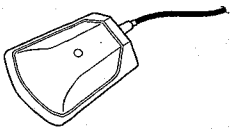
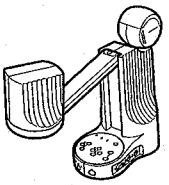
TV monitor

A TV monitor is required for your meetings.

Unit	Description
TV monitor 	A TV is used as a meeting monitor and speaker. It displays the remote party, graphics, and menus. If you use a Sony TV, you can operate it with the Remote Commander supplied with the Compact Conference Package.

Other options

The following optional devices are also available to improve your meetings.

Unit	Description
PCS-A300 Microphone 	Allows you to accommodate extra two or three participants. You can connect two microphones. However, you cannot use both the built-in microphone and the external microphone at the same time.
PCS-DS150/DS150P Document Stand 	This document camera can transmit the video signal to the Compact Processor using infrared rays, without connecting a cable to the Compact Processor. You can easily transmit the RGB signal of a PC to the Compact Processor.

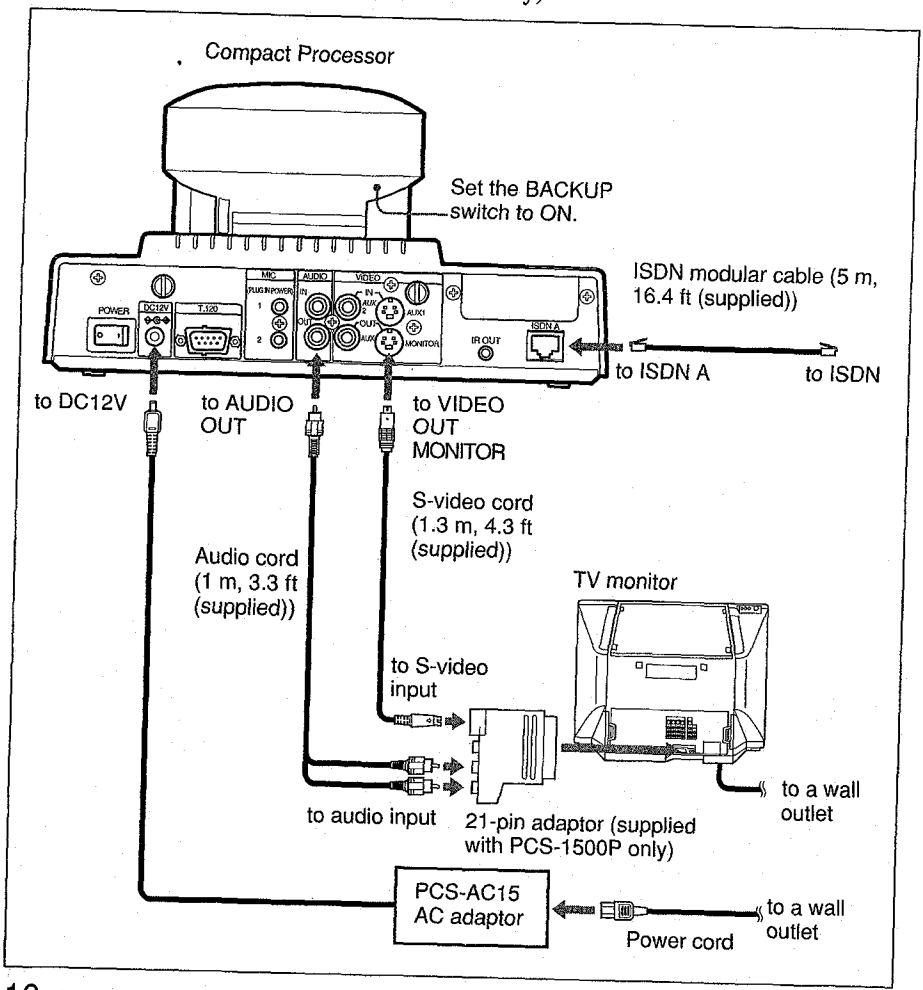
Unit	Description
PCS-I150 BRI Board	Provides two ISDN jacks. The connection with 6B channels is available.
PCS-I151 V.35 Board	Provides the V.35 connector. The connection via the V.35 interface is available.
PCS-I152 LAN Board	Allows you to hold a meeting on the LAN that corresponds to H.323.
PCS-K32 V.35 Conversion Connector Cable	Connects one end to the V.35 connector (on the PCS-I151 V.35 Board) and the other end to the terminal adapter. (1 m, 3.3 ft)
PCS-K60 S-video cord	Connects one end to the S-video jack on the video equipment and the other end to the Compact Processor.
PCS-UC150 Upgrade Kit	Allows you to use this unit as the MCU (Multipoint Control Unit).

Basic System Connection

Connect the TV monitor and the AC adaptor to the Compact Processor, and connect to the ISDN line with the supplied ISDN modular cable.
The following cables; the ISDN modular cable and the audio cord, each cable is equipped with the color label. When connecting these cables, match the label color with the color of the connector name printed on the rear panel.

Notes

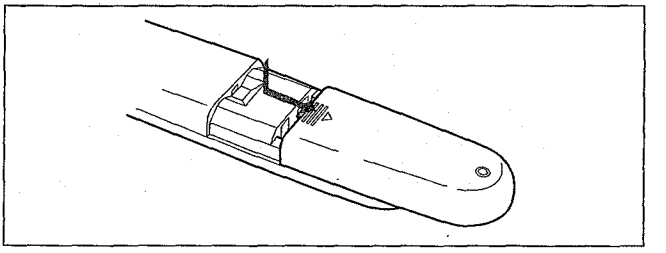
- Be sure to turn off all the equipment before making any connections.
- If your TV has the 21-pin connector, use the supplied 21-pin adaptor. (PCS-1500P only)



Inserting Batteries into the Remote Commander

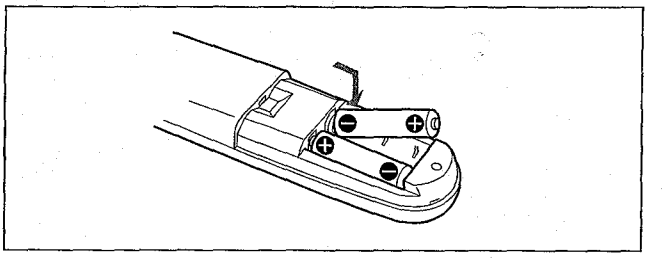
The supplied Remote Commander controls most of the functions. This section describes how to insert batteries into the Remote Commander.

1 Remove the battery compartment cover.



2 Insert two size AA (LR6) alkaline batteries (supplied) with correct ⊕ and ⊖ polarity into the battery compartment.

When inserting the batteries, be sure to put the negative end at first.



Caution

Be sure to place the negative ⊖ end of the battery at first. If you place the positive ⊕ end at first, there is a possibility of damaging the insulated film covering the battery and creating a short circuit.

3 Replace the cover.

Battery life

When the Remote Commander no longer functions properly, replace both the batteries.

Notes on batteries

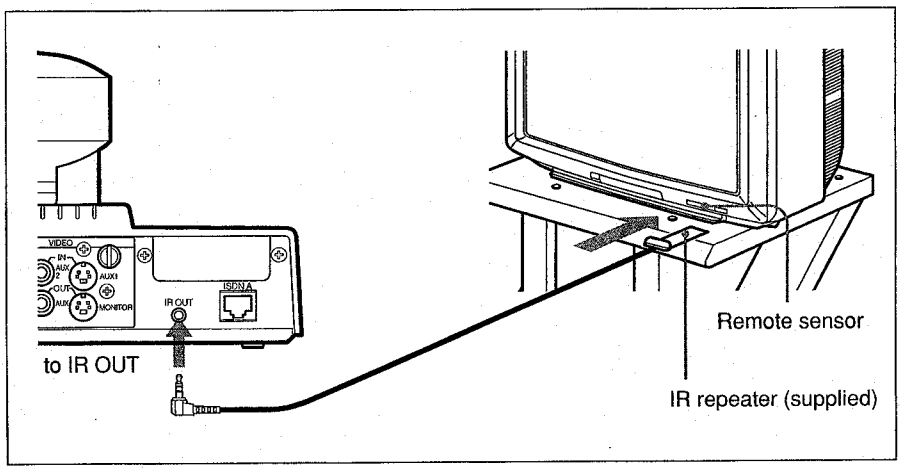
To avoid possible damage from battery leakage or corrosion, observe the following:

- Be sure to insert the batteries in the correct direction.
- Do not mix old and new batteries, or different types of batteries.
- Do not attempt to charge dry-cell batteries.
- If you do not intend to use the Remote Commander for a long time, remove the batteries.
  If battery leakage occurs, clean the battery compartment and replace all the batteries.

Preparing the TV Monitor

Insert the IR repeater below the remote sensor of the TV monitor. Once you set the IR repeater, you can turn on the Compact Processor and a Sony TV monitor together by pressing the I/⏻ button on the Remote Commander.
If the IR repeater does not function properly, set MONITOR in the Other Setup menu to MODE2 (PCS-1500); to MODE4 (PCS-1500P).

For details on the MONITOR setting, see "Other Setup menu" on page 82.



When using a Sony TV monitor

The TV monitor can be operated from the Remote Commander.

For details on operating the Remote Commander, see "To operate a Sony TV monitor" on page 117.

To adjust the TV monitor screen

Use the controls on the TV monitor to adjust the screen (picture, hue, contrast, brightness, and sharpness).

For details on adjusting the screen, refer to the operating instructions supplied with the TV monitor.

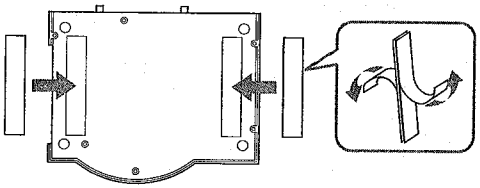
Note

Do not activate the surround function of the TV monitor. This causes strange sounds since the echo canceler on the Compact Processor will not function properly.

Installing the Compact Processor

When you install the Compact Processor, use the supplied Velcro (long). This will prevent the Compact Processor from falling down.

1 Stick one side of the supplied Velcro (long) to the bottom of the Compact Processor.



2 Stick the other side of the Velcro to the top of the TV monitor.

3 Attach the Compact Processor and the TV monitor by securing the Velcro.

Turning the System On/Off

This section describes how to turn on and off the Compact Processor.

Note

Set the CONF/DOC/TV selector on the Remote Commander to "CONF" when operating the Compact Processor.

Turning On

The following describes how to turn on the Compact Processor.

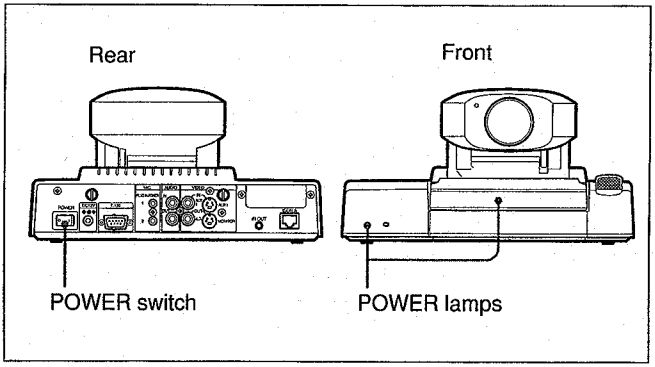
1 Make sure the TV monitor is on standby.

For details on how to set the TV monitor into a standby state, refer to the operating instructions supplied with the TV monitor.

2 Turn on the power of any other equipment to be used during the meeting.

3 Set the POWER switch on the rear of the Compact Processor to on.

Soon, the Compact Processor and the TV monitor are turned on.
The POWER lamps (green) on the camera and the Compact Processor light up, and the self-diagnostic starts. The picture shot by the local camera appears on the monitor screen after the self-diagnostic is completed.



When the Compact Processor is turned on for the first time

The ISDN Configuration (COUNTRY) menu appears on the monitor screen after the self-diagnostic is completed.
Register your local system data on the ISDN Configuration menus.

For details on the registration, see "Registering Local Information" on page 60.

Sleep function

The Compact Processor is turned into sleep mode to save power, if you do not operate the Compact Processor for about 10, 30, or 60 minutes.
The POWER lamp on the main unit flashes while in sleep mode.
Once a call comes in, the sleep function is automatically released.

To release the sleep function

Press any of the buttons on the Remote Commander.

To set the time that the unit turns into sleep mode

Set the time by setting SLEEP FUNCTION in the Other Setup menu. If you do not want to use the sleep function, set SLEEP FUNCTION to OFF.

For details on the SLEEP FUNCTION setting, see "Other Setup menu" on page 82.

Notes

- The POWER lamp on the camera does not flash even if the system is in sleep mode.
- A Sony TV monitor is turned into standby mode.

Setting the System (Compact Conference Package) to be on Standby

When the system is on standby, you can turn the system on with the I/⏻ button on the Remote Commander.

Notes

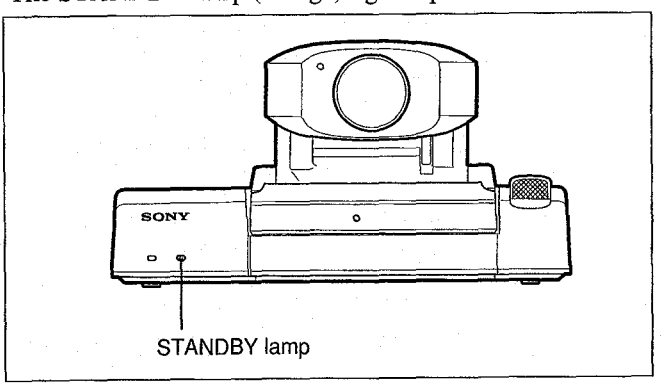
- Do not turn off the POWER switch on the rear panel while the menu is displayed on the monitor screen.
- When you have installed the optional PCS-I152 LAN Board, and holding a meeting on a LAN, the Compact Processor on standby cannot receive a call.

1 Press the I/⏻ button on the Remote Commander.

The indication "POWER OFF Are you sure?" appears on the monitor screen.

2 Press the I/⏻ button on the Remote Commander.

Both the Compact Processor and the TV monitor are turned into standby.
The STANDBY lamp (orange) lights up.

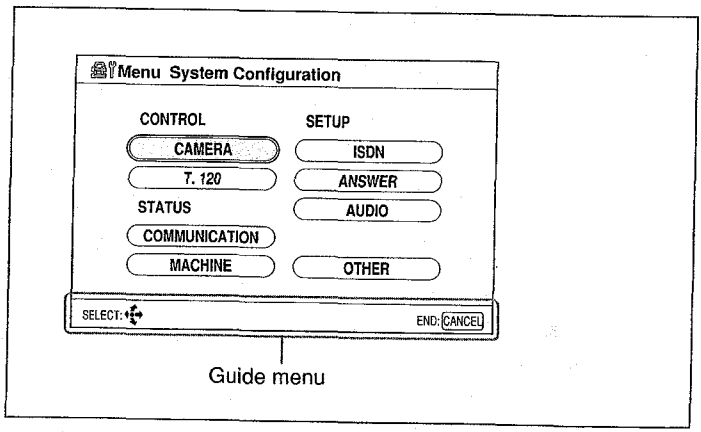


To cancel turning into standby

Press the CANCEL button on the Remote Commander in step **2**.

On the Guide Menu

When a menu is displayed, the guide menu appears on the lower part of the monitor screen.
You can easily operate the Compact Processor under its guidance. But, the guidance is in English only.

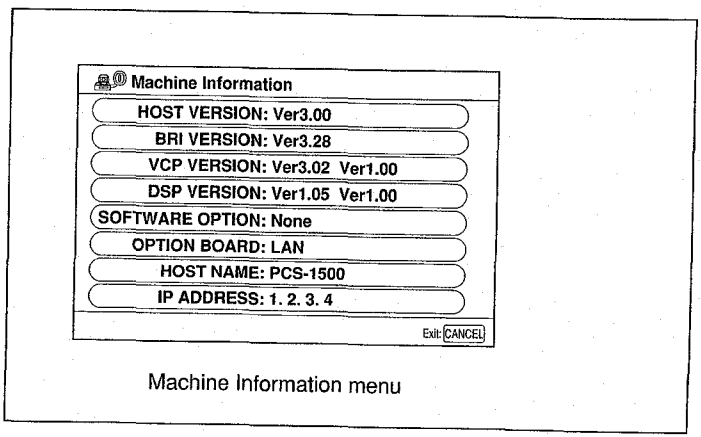


Guide menu

On the Version And Option Indications

You can check the Compact Processor version and the option installed into the unit, with the Machine Information menu.

For details on the Machine Information menu, see "Machine Information menu" on page 85.



Machine Information menu

Turning Off

The following describes how to turn off the Compact Processor.

1 Set the POWER switch on the rear of the Compact Processor to off.

2 Turn off the power of any other equipment to be used during the meeting.

Notes

- If you are not going to use the system for an extended period, set the POWER switch to off.
- You cannot receive any calls from remote parties if the POWER switch is set to off.

Chapter 2

Basic Operation During a Meeting

Calling a Remote Party

You can start a meeting with a remote party by dialing. Once you have made a connection with the remote party, you can begin talking just like normal phone call.
The following describes how to call a remote party.

You have to register your local system data and set up the Compact Processor before starting a meeting.

For details on registration and setup, see Chapter 4 "Registration and Setup."

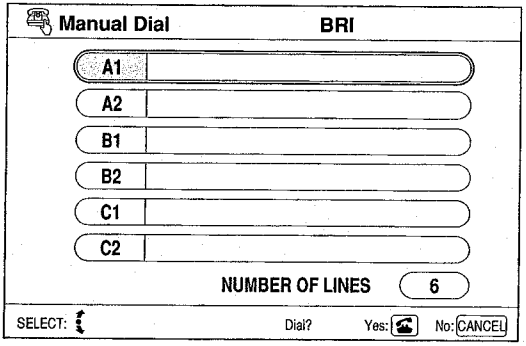
Calling an Unregistered Remote Party

The Manual Dial menu for connecting on a LAN is different from the one for the ISDN line. When LINE I/F in the Dial Setup menu is set to LAN, the Manual Dial LAN menu is displayed.

To connect via the ISDN lines

1 Press the DIAL (☎) button or one of the number buttons (0 – 9) on the Remote Commander.

The Manual Dial menu appears on the monitor screen.



Note

The B1 to C2 boxes are only displayed when you have installed the optional PCS-I150 BRI Board.

2 Enter the telephone number of the remote party to have a meeting with in the A1 and A2 boxes.

Move the joy stick up or down to select the box, then enter the number with the number buttons on the Remote Commander.

- To delete a telephone number, press the CLEAR button on the Remote Commander. The number entered is deleted.
- To copy a telephone number, press the LINE COPY button or the joy stick on the Remote Commander. The number entered are copied to the next box.
- To delete the last number, press the BACK SPACE button on the Remote Commander, or move the joy stick to the left. The last number is deleted.

Note

Do not enter your prefix number in these boxes.

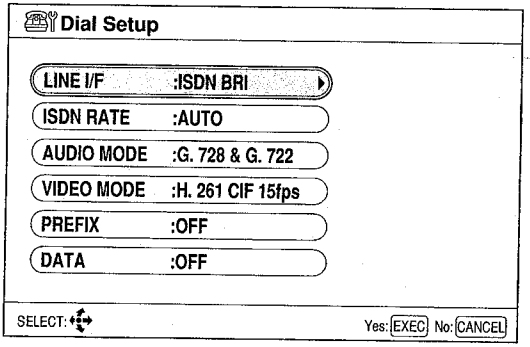
3 Select the number of lines to be used.

Move the joy stick downward to select the NUMBER OF LINES box, then move the joystick rightward or leftward to set the number of lines.

If you want to check or change the settings of the Dial Setup menu, follow step **4**; dial the number, follow step **7**. Since the LINE I/F setting is displayed on the upper-right corner of the Manual Dial menu, you can also check the setting in the Manual Dial menu.

4 Press the EXEC button on the Remote Commander.

The Dial Setup menu appears on the monitor screen.



5 Set up or check the following items:

LINE I/F: Selects the line interface.
ISDN RATE: Selects the ISDN transfer rate.
AUDIO MODE: Selects the protocol for the audio encoding.
VIDEO MODE: Selects the protocol for the video encoding.
PREFIX: Selects the prefix number setting.
DATA: Selects whether to have a T.120 data meeting.

For details on each setting of the items, see "On Items in the Dial Setup Menu" on page 30.

(Continued)

- To select an item to be changed, select an item with the joy stick on the Remote Commander, then press it.
- To set up an item, select a setting with the joy stick on the Remote Commander, then press it.
- To cancel the setup, press the CANCEL button on the Remote Commander.

Notes

- When using the Compact Precessor as the MCU, items below cannot be set up:
  ISDN RATE, AUDIO MODE, VIDEO MODE, DATA.
- When using a LAN, items below cannot be set up:
  ISDN RATE, PREFIX, DATA.

6 Press the EXEC button on the Remote Commander.

The Manual Dial menu appears on the monitor screen again.

7 Press the DIAL (☎) button on the Remote Commander.

The system dials the number that is input in step **2**, and the indication "Dialing" appears on the monitor screen. When the connection is completed, the indication "MEETING STARTS!" appears on the monitor screen.

To cancel dialing before the connection is completed

Press the CANCEL button on the Remote Commander.

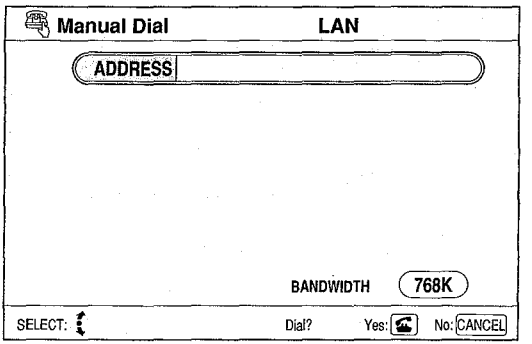
To connect on a LAN

Notes

- Meetings on a LAN are only available when the optional PCS-I152 LAN Board has been installed.
- The Manual Dial LAN menu is displayed only when LINE I/F is set to LAN.

1 Press the DIAL (☎) button or one of the number buttons (0 – 9) on the Remote Commander.

The Manual Dial LAN menu appears on the monitor screen.



2 Enter the IP address (or the host name and domain name) of the remote party to have a meeting with in the ADDRESS box.

Enter the address (or the host name and domain name) with the number buttons on the Remote Commander.
You can enter a dot by moving the joy stick on the Remote Commander to the right.

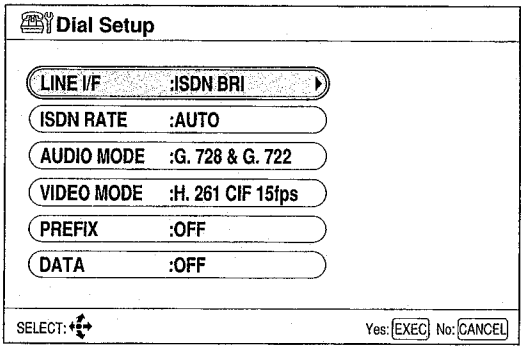
3 Select the bandwidth.

Move the joy stick down to select the BANDWIDTH box, then move the joy stick on the Remote Commander to the right or left to set the bandwidth.

If you want to check or change the settings of the Dial Setup menu, follow step **4** on page 27; dial the number, follow step **7** on page 28. Since the LINE I/F setting is displayed on the upper-right corner of the Manual Dial LAN menu, you can also check the setting in the Manual Dial LAN menu.

On Items in the Dial Setup Menu

The settings for the Dial Setup menu are as follows:



LINE I/F

ISDN BRI: Connects to a remote party via the normal ISDN line.

ISDN BRI (Bonding): Connects to a remote party via the Inverse Multiplexer interface.
"Bonding (Bandwidth on Demand Interoperability Group)" is a trademark of THE BONDING CONSORTIUM.

ISDN BRI (Speech): Connects to a normal phone to have a voice meeting.

V.35 (with RS-366): Connects to a remote party via the V.35 interface by specifying the telephone number.

V.35 (without RS-366): Connects to a remote party via the V.35 interface without specifying the telephone number.

LAN: Connects to a remote party using a LAN.

ISDN RATE

AUTO: Connects to a remote party with a normal ISDN line.

56K: Connects to a region or country with a 56 Kbps ISDN transfer rate.

AUDIO MODE

G.722: The audio bandwidth is wider for better sound quality. (7 kHz)

G.728 & G.722: The audio bandwidth is narrow but the image quality is better. (G.728: 3.4 kHz)

VIDEO MODE

H.261 CIF 15fps: Sends pictures based on Recommendation H.261 at a maximum rate of 15 frames per second.

H.261 CIF 30fps: Sends pictures based on Recommendation H.261 at a maximum rate of 30 frames per second.

H.263 CIF 15fps: Sends pictures based on Recommendation H.263 at a maximum rate of 15 frames per second.

H.263 CIF 30fps: Sends pictures based on Recommendation H.263 at a maximum rate of 30 frames per second.

PREFIX

OFF: Does not use the prefix number.

1: Uses the setting 1 set in the ISDN Configuration (PREFIX) menu.

2: Uses the setting 2 set in the ISDN Configuration (PREFIX) menu.

3: Uses the setting 3 set in the ISDN Configuration (PREFIX) menu.

For details on the setting in the ISDN Configuration (PREFIX) menu, see "Registering Local Information" on page 60.

DATA

T.120: Holds a T.120 data meeting.

OFF: Does not hold a T.120 data meeting.

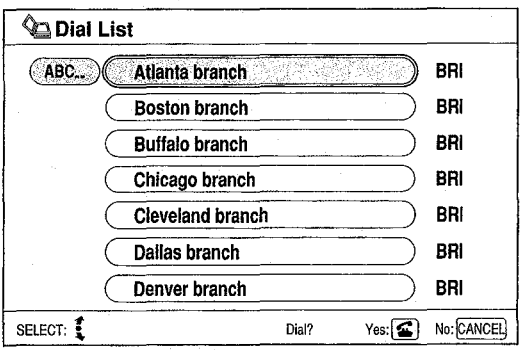
Notes

- When the optional V.35 Board has not been installed, you can select neither V.35 (with RS-366) nor V.35 (without RS-366) of LINE I/F.
- When the optional LAN Board has not been installed, you cannot select LAN of LINE I/F.

Calling a Registered Remote Party

1 Press the LIST button, the START (◈) button, or the joy stick on the Remote Commander.

The Dial List menu appears on the monitor screen.



The LINE I/F setting appears on the right of the index title.

2 Select an index title (remote party) with the joy stick on the Remote Commander.

Select an index title with the joy stick on the Remote Commander.

- To page down the Dial List menu, press the # button on the Remote Commander or move the joy stick leftward.
- To page up the Dial List menu, press the * button on the Remote Commander or move the joy stick rightward.

You can sort the list on the Dial List menu.

For details, see "To sort the list on the Dial List menu" on the next page.

3 Press the DIAL (☎) button on the Remote Commander.

The system dials the selected remote party in step **2**, and the indication "Dialing" appears on the monitor screen. When the connection is completed, the indication "MEETING STARTS!" appears on the monitor screen.

To cancel dialing before the call is connected

Press the CANCEL button on the Remote Commander.

To sort the list on the Dial List menu

You can sort the list on the Dial List menu alphabetically.

Press one of the number buttons on the Remote Commander.

The titles are rearranged alphabetically, and they are displayed beginning with the title whose first character is the same as the one on the pressed button.
When you press the 0 button on the Remote Commander, the seven titles are displayed beginning wit
h the most recently dialed title.
When you press the 1 button on the Remote Commander, the seven titles are displayed beginning with the one whose initial letter has a number.

Example: Press the 2 button.
The list is sorted and it is displayed beginning with the one whose initial letter is A.

Example: Press the 3 button.
The list is sorted and it is displayed beginning with the one whose initial letter is D.

Receiving a Call

When a call comes in, the connection process with differs depending on the setting of the answer mode.

Auto answer mode

The system automatically receives the call and starts the meeting. However, even if you are not ready to start the meeting, the local picture will be displayed on the remote party's monitor screen.

Manual answer mode

Incoming calls are not automatically connected. You must manually connect the call.
You can start the meeting whenever you are ready.

Notes

- Whichever mode you choose, the Compact Processor must be turned on, or be in standby/sleep mode to receive a call.
- Make sure that the TV monitor is on standby.
- When you have installed the optional PCS-I152 LAN Board, and holding a meeting on a LAN, the Compact Processor on standby cannot receive a call.

Setting the Answer Mode

1 Press the MENU button on the Remote Commander.

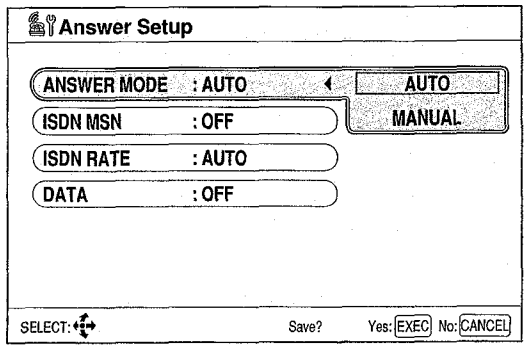
The Menu (System Configuration) menu appears on the monitor screen.

2 Select ANSWER with the joy stick, then press it.

The Answer Setup menu appears on the monitor screen.

3 Select ANSWER MODE with the joy stick, then press it.

The ANSWER MODE items appear.



4 When selecting the auto answer mode, select AUTO with the joy stick, then press it.
When selecting the manual answer mode, select MANUAL with the joy stick, then press it.

5 Press the EXEC button on the Remote Commander.

The answer mode setting is completed.

6 Press the CANCEL button on the Remote Commander.

The menu disappears from the monitor screen.

Answering Calls in Auto Answer Mode

The system automatically receives a call when it is on standby or in sleep mode.

When a call comes in, the Compact Processor starts ringing, and the indication "Incoming Call" appears on the monitor screen.
Once the connection has been made, the remote party appears on the local monitor screen, and the local party appears on the remote screen. You are now ready to hold your meeting.
The indication "MEETING STARTS!" appears on the monitor screen.

Answering Calls in Manual Answer Mode

When your system is in manual answer mode, you need to connect incoming calls manually.
When a call comes in, the Compact Processor starts ringing, and the indication "Incoming Call Answer?" appears on the monitor screen.

Press the EXEC button on the Remote Commander.

Once the connection has been made, the remote party appears on the local monitor screen, and local party appears on the remote screen. You are now ready to hold your meeting.
The indication "MEETING STARTS!" appears on the monitor screen.

If you do not want to receive a call

Press the CANCEL button on the Remote Commander.
The Compact Processor stops ringing.

If you are operating the system when a call comes in

The indication "PLEASE CLOSE THIS MENU" appears on the monitor screen. If you receive the call, finish the current operation. If you cannot receive the call according to your current operations, ignore it and continue with the current operation.

When the system fails to make a connection

The indication "CANNOT COMPLETE CONNECTION" appears along with an ISDN cause code and a message on the monitor screen.

For details on ISDN cause codes and messages, see "On Screen Messages" on page 119.

When the optional PCS-I152 LAN Board has been installed

If a call comes in via the ISDN line during the meeting on a LAN, the Compact Processor is busy.

Checking the Connection Status

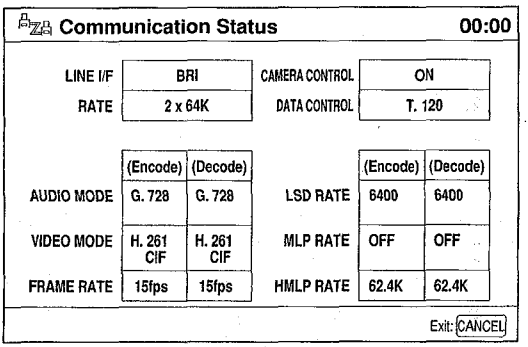
During a meeting, you can check the status of the communication. Elapsed time also appears on the monitor screen during a meeting.

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

2 Select the COMMUNICATION with the joy stick, then press it.

The Communication Status menu appears on the monitor screen.



3 Check the status:

LINE I/F: Displays the line interface being used.
RATE: Displays the number of lines and the transfer rate being used.
CAMERA CONTROL: Displays the far end camera control protocol.
DATA CONTROL: Displays the data transmission protocol.

(Continued)

The items below are separately displayed in the columns Encode and Decode.
The columns Encode indicate the status being sent, the columns Decode indicate the status being received.

AUDIO MODE: Displays the audio encoding system.
VIDEO MODE: Displays the video encoding system.
FRAME RATE: Displays the maximum frame rate of the motion picture.
LSD RATE: Displays the LSD (Low Speed Data) rate.
MLP RATE: Displays the MLP (Multi Layer Protocol) rate.
HMLP RATE: Displays the HMLP (High speed Multi Layer Protocol) rate.

4 Press the CANCEL button on the Remote Commander twice.

The menu disappears from the monitor screen.

On elapsed time

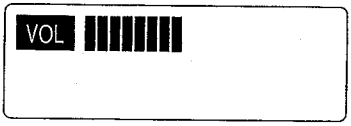
When you set TIME to ON in the Other Setup menu, the elapsed time appears on the monitor screen during a meeting. You can use it as a guide, and it is convenient for checking communication costs. If you do not need to display the elapsed time, set TIME to OFF.

For details on the TIME setting, see "Other Setup menu" on page 82.

Adjusting the Sound

Adjusting the Volume

You can adjust the volume sent from remote parties.
Press the VOLUME/BRIGHT + button to increase the volume; the VOLUME/BRIGHT – button to decrease it.
The VOL (volume) bar appears on the monitor screen.
After awhile, the bar automatically disappears if you do not operate.



Notes

- You have to set the volume of the TV monitor at first.
- If feedback occurs, decrease the volume.

Muting Local Conversations – Mute Function

You can mute local conversations.
If you press the MIC/DARK button, local conversations will not be sent to the remote party.

When local conversations are muted, the mute indication MIC OFF is displayed on the monitor screen.

To cancel muting

Press the MIC/DARK button on the Remote Commander again.

The mute indication MIC OFF disappears from the monitor screen.

Synchronizing Voice and Motion – Lip Synchronization

During the meeting, voice and motion may lose synchronization.
The automatic lip synchronization function built into the system solves this problem by closely synchronizing audio and video before they are transmitted to the remote party.

1 Press the MENU button on the Remote Commander.

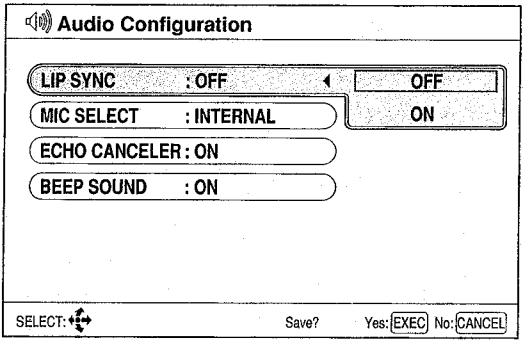
The Menu (System Configuration) menu appears on the monitor screen.

2 Select AUDIO with the joy stick, then press it.

The Audio Configuration menu appears on the monitor screen.

3 Select LIP SYNC with the joy stick, then press it.

The LIP SYNC items appear.



4 Select ON with the joy stick, then press it.

5 Press the EXEC button on the Remote Commander.

The lip synchronization setting is completed.

6 Press the CANCEL button on the Remote Commander.

The menu disappears from the monitor screen.

To cancel lip synchronization

Select OFF in step **4**.

Note

The lip synchronization function only works for your own party. To activate the lip synchronization function at the remote party, you must ask them to do so.

On the Echo canceler

The Compact Processor is equipped with the echo canceler. When you use the built-in echo canceler, set ECHO CANCELER to ON in the Audio Configuration menu; when not in use, set to OFF. If you use an echo canceler of external audio equipment connected to the system, set ECHO CANCELER to EXTERNAL. It should normally be set to ON.

For details on the ECHO CANCELER setting, see "Audio Configuration menu" on page 84.

Adjusting the Camera

You can adjust the local camera to obtain the best viewing results.
During communication, you can also adjust the remote camera, and adjust images being sent from the remote camera.

Notes

- A malfunction may occur if the local and remote parties try to adjust the same camera at the same time.
- You cannot control the remote camera during a meeting if H.281 is not selected as the far end camera control protocol.
- When you have installed the optional PCS-I152 LAN Board, and holding a meeting on a LAN, you cannot control the remote camera.
- You cannot control the remote camera during a meeting if the Compact Processor is used as the MCU.
- If you adjust the camera angle during a meeting, a motor noise may picked up by the microphone, and it may be heard through a speaker. This is not a malfunction.
  If you frequently adjust the camera, we recommend you to use the optional PCS-A300 Microphone. After connecting the PCS-A300 Microphone, the built-in microphone does not function.

For details on the setting when using the PCS-A300 Microphone, see "Audio Configuration menu" on page 84.

To select the camera to be adjusted

Before adjusting the camera, you must select the local or remote camera to be controlled.

Press the FAR/NEAR button on the Remote Commander.

When the remote camera is selected, the indication FAR appears on the monitor screen.
When the local camera is selected, the indication FAR does not appear on the monitor screen.

Note

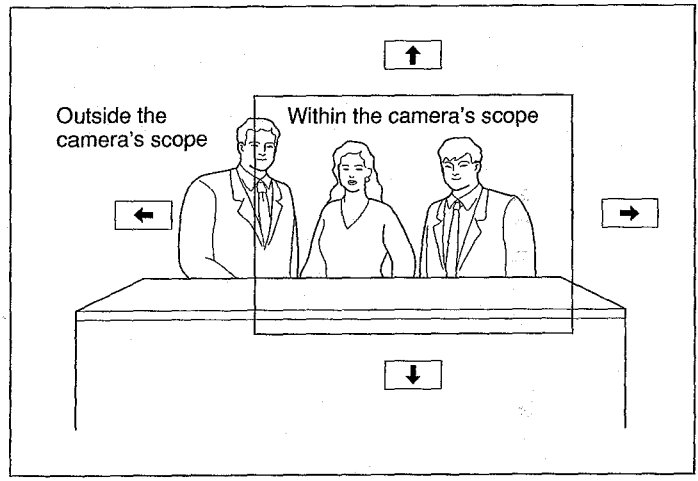
You cannot control the remote camera if you do not set CAMERA CONTROL to ON in the Other Setup menu.

Adjusting the Camera Angle and Zoom

You can adjust the camera angle and zoom.

To adjust the camera angle

Press the CAMERA (↑/↓/←/→) buttons on the Remote Commander to view any areas not currently covered by the camera.



To adjust zoom

Press the ZOOM/CH T button on the Remote Commander to zoom in or the ZOOM/CH W button to zoom out. Adjust zoom to display the desired picture.

Adjusting Focus and Brightness

Focus and brightness are automatically adjusted.
We recommend you not to use the manual adjustments since the camera automatically adjust itself for the best focus and brightness.

To adjust focus manually

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

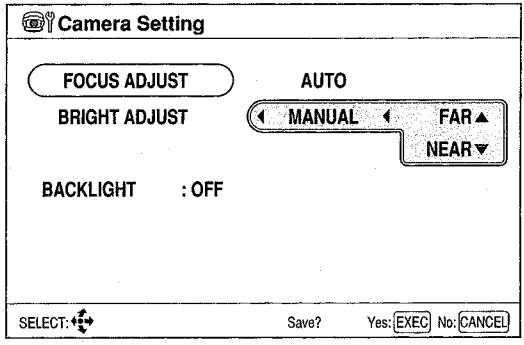
2 Select CAMERA with the joy stick, then press it.

The Camera Setting menu appears on the monitor screen.

3 Select FOCUS ADJUST with the joy stick, then press it.

The FOCUS ADJUST items appear on the monitor screen.

4 Select MANUAL with the joy stick, then press it.



5 Select FAR with the joy stick, then move it upward to move the focus point further away from the camera. Select NEAR with the joy stick, then move it downward to move the focus point closer to the camera.

6 Move the joy stick leftward to select FOCUS ADJUST, then press the EXEC button on the Remote Commander.

The focus setting is completed.

7 Press the CANCEL button on the Remote Commander .

The menu disappears from the monitor screen.

To adjust focus automatically

Select AUTO in step **4**.

To adjust brightness

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

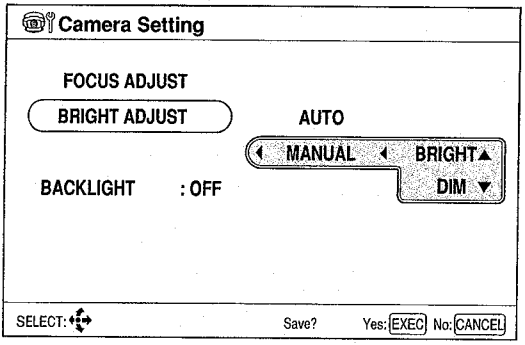
2 Select CAMERA with the joy stick, then press it.

The Camera Setting menu appears on the monitor screen.

3 Select BRIGHT ADJUST with the joy stick, then press it.

The BRIGHT ADJUST items appear on the monitor screen.

4 Select MANUAL with the joy stick, then press it.



5 Select BRIGHT with the joy stick, then move it upward to make the picture brighter.
Select DIM with the joy stick, then move it downward to make the picture darker.

6 Move the joy stick leftward to select BRIGHT ADJUST, then press the EXEC button on the Remote Commander.

The brightness setting is completed.

(Continued)

7 Press the CANCEL button on the Remote Commander.

The menu disappears from the monitor screen.

To adjust brightness automatically

Select AUTO in step **4**.

To shoot with the backlight function

When you shoot a subject with the light source behind the subject, use the backlight function.

1 Press the MENU button on the Remote Commander.

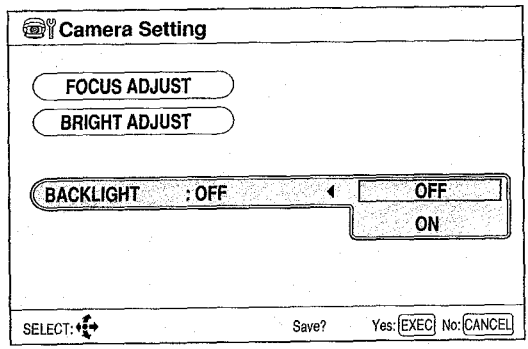
The Menu (System Configuration) menu appears on the monitor screen.

2 Select CAMERA with the joy stick, then press it.

The Camera Setting menu appears on the monitor screen.

3 Select BACKLIGHT with the joy stick, then press it.

The BACKLIGHT items appear on the monitor screen.



4 Select ON with the joy stick, then press it.

The backlight function is activated.

5 Press the EXEC button on the Remote Commander.

6 Press the CANCEL button on the Remote Commander repeatedly.

The menu disappears from the monitor screen.

To cancel the backlight
Select OFF in step **4**.

Presetting Angle, Zoom, Focus, and Brightness Settings

You can store the camera settings in memory up to six, and each preset has the angle, zoom, focus, and brightness settings. Once a setting has been stored, you can easily recall a setting from the six presets.

To store a setting

1 Set up angle, zoom, focus, and brightness.

For details on the angle and zoom settings, see "Adjusting the Camera Angle and Zoom" on page 43, and on the focus and brightness settings, see "Adjusting Focus and Brightness" on page 43.

2 Press down the PRESET button on the Remote Commander, then press one of the letter buttons (A to F, under which you want to store the setting) on the Remote Commander.

The setting will be stored under the selected letter.

To recall a preset

Press one of the letter buttons (A to F) on the Remote Commander.

The camera is automatically adjusted by the preset under the selected letter.

On backup

The memories of the preset are erased when the POWER switch on the Compact Processor is set to off. To retain those memories, set the BACKUP switch at the rear of the camera to ON.

Notes

- In the camera, the built-in lithium battery acts as the power source for retaining the memories and is kept charged as long as the system is used. If the system is used for shorter period of time with the BACKUP switch set to ON, however, the battery is gradually discharged. Besides if you do not use the system at all for almost 12 weeks, the battery is completely discharged. To retain the memories of the settings, you should recharge the battery.
- To recharge the battery, connect the camera to the Compact Processor and leave it for approximate 48 hours with the POWER switch set to on.

Tracking a Subject Automatically — Automatic Target Tracking Function

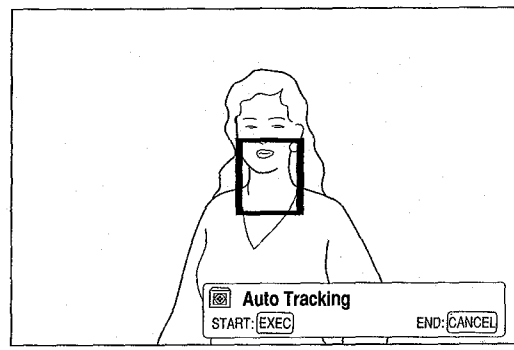
You can have the camera memorize a particular color or brightness so that automatically tracks a subject having the memorized color or brightness.
If a subject almost goes off the screen, the camera performs the pan/tilt action so that the subject is placed back in the middle of the screen.

Note

The automatic target tracking function is only available for the local camera.

1 Press the AUTO TRACK button on the Remote Commander.

The Auto Tracking menu and the frame appear on the monitor screen.



2 Press the CAMERA (↑/↓/←/→) and the ZOOM/CH buttons on the Remote Commander to place a subject into the frame.

Notes

- Be sure to place the subject so that the portion uniform in brightness and color is in the frame.
- The camera might not recognize a subject if the portion different from the subject in brightness and color, such as the backdrop, is placed together in the frame.

3 Press the EXEC button on the Remote Commander.

The indication ◙ appears on the monitor screen.
The automatic target tracking function starts and the frame disappears from the monitor screen.

To cancel the automatic target tracking function

Press the AUTO TRACK button on the Remote Commander to display the Auto Tracking menu, then press the CANCEL button.
The indication ◙ disappears from the monitor screen.

If the frame is repeatedly extended to the full screen

The camera does not recognize the subject. Press the AUTO TRACK button on the Remote Commander again and go back to step **2**.

If the lamp at the side of the lens lights up

The camera is not capturing the memorized subject correctly. In this case, perform the pan/tilt operation so that the subject comes into the screen. Or have the subject memorized onto the camera again.

Note

When the frame does not track the subject, repeat steps **2** and **3** until the frame starts tracking the subject while adjusting the lighting and the portion of the subject so that the color and brightness of the subject is optimized.

Selecting the Picture and Sound

You can select the picture and sound from both the local and remote sites equipment.

1 Press the DISPLAY FAR/NEAR button on the Remote Commander.

Each time you press the button, the picture on the monitor screen switches between the local and the remote.

2 Press one of the INPUT buttons on the Remote Commander to switch the picture on the screen.

MAIN: Displays the picture from the main camera.
OBJECT: Displays the picture of the optional PCS-DS150/DS150P Document Stand via the IR sensor on the front panel.
VIDEO/TV: Each time you press this button, the picture is switched among all the connected equipment (including the main camera).
MAIN (Main camera) → OBJECT (Via the IR sensor) → VIDEO IN AUX 1 → VIDEO IN AUX 2 → MAIN (Main camera) → .....

The following indications appear on the monitor screen according to the input.
MAIN: The main camera is selected.
OBJECT: The optional PCS-DS150/DS150P Document Stand is selected.
AUX1: The equipment connected to the VIDEO IN AUX 1 jack is selected.
AUX2: The equipment connected to the VIDEO IN AUX 2 jack is selected.

3 Press the AUDIO button on the Remote Commander to switch the audio input.

Each time you press this button, the audio input switches as follows:
Microphone → External input → Microphone and external input → Microphone → .....

The following indications appear on the screen according to the audio input.

MIC: The microphone is selected.

AUX: The external equipment is selected.

MIC + AUX: Both the microphone and the external equipment are selected.

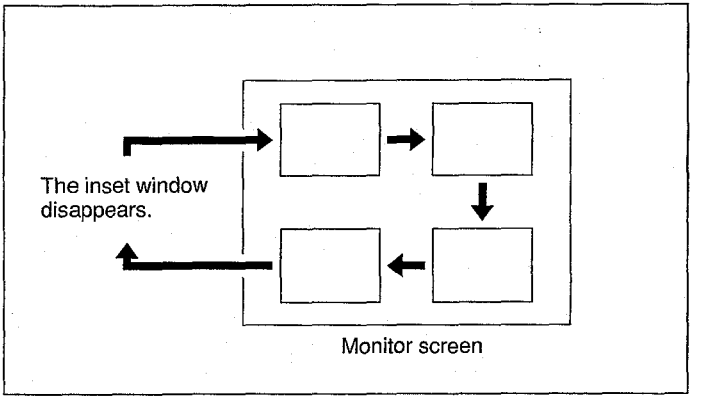
Note

The audio input of the remote cannot be switched from the local system.

Monitoring Yourself in the Inset Window

The inset window allows you to monitor your own party while viewing the remote party. **(Picture-in-picture function)**

Press the PinP button on the Remote Commander.
If an inset window is not displayed, the inset window appears on the monitor screen.
When it is already displayed, each time you press the PinP button, the inset window moves as follows:



Notes

- The inset window is displayed at the same position as it was displayed last. If the inset window is not displayed last, it is not displayed.
- The inset window does not appear when your system is not connected to a remote party.
- The inset window does not appear when a still picture is displayed on the main screen.
- You cannot use the picture-in-picture function when a picture of the local party is displayed on the main screen during a meeting.

Sending Still Pictures

When you send pictures that contain lots of text, we recommend you to send that picture as a still picture. Since still pictures are more clear than moving pictures for reading text. You can send a video as a still picture of external equipment connected to the the Compact Processor, or of the camera. You can also send pictures continuously.

Note

You cannot send still pictures when the video encoding system is set to H.263.

Sending Still Pictures Continuously

Press the PIX SHOT AUTO button on the Remote Commander.

The moving picture on the monitor screen is frozen, and the indication appears on the monitor screen.
When the local picture is displayed, the still picture is sent.

To cancel sending still pictures

Press the PIX SHOT AUTO or SNAP button on the Remote Commander.

Note

The interval that takes to send the next still picture depends on the transfer rate.

Sending One Still Picture

Press the PIX SHOT SNAP button on the Remote Commander.

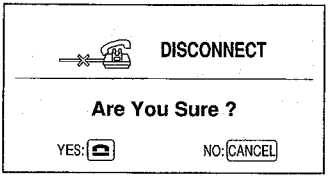
The moving picture on the monitor screen is frozen, and the indication appears on the monitor screen.
When the local picture is displayed, the still picture is sent.

To display the moving picture

Press the DISPLAY FAR/NEAR button on the Remote Commander.

Ending a Meeting

Press the DISCONNECT (☎) button on the Remote Commander.
The following indication appears on the monitor screen.



To disconnect the call

Press the DISCONNECT (☎) button on the Remote Commander again.

Note

The Compact Processor remains on even if the connection is broken.

To continue your meeting

Press the CANCEL button on the Remote Commander.

Chapter 3

Advanced Operation

Connecting With an MCU

You can perform a multiple communication with making a connection to an MCU (Multipoint Control Unit).
Once you connect with the MCU that has the chair control function, the chair control is activated among 99 terminals.

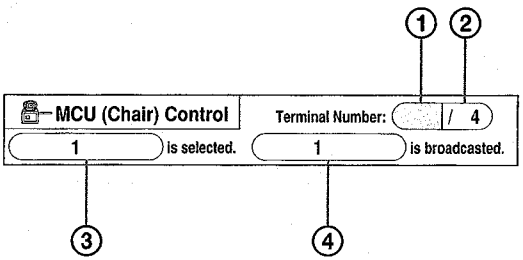
Note

When you have installed the optional PCS-I152 LAN Board, and using a LAN, the chair control is deactivated.

1 Connect to an MCU.

2 Press the MULTI/AUTO button on the Remote Commander.

The MCU (Chair) Control menu appears on the monitor screen.



① Enters a terminal number from 1 to 99 in this box.
② Displays the number of connected terminals from 1 to 99.
③ Displays a selected terminal number from 1 to 99; "This terminal," "No one," or "Unidentified terminal."
④ Displays a broadcasted terminal number from 1 to 99; "This terminal," "No one," or "Unidentified terminal."

3 Select the picture to be displayed or broadcast with the MCU (Chair) Control menu.

Note

When you do an incapable operation, the indication "Command is rejected by MCU" appears on the monitor screen.

To see a picture of the selected terminal

1 Enter the terminal number in the box ① in the Chair Control menu with the number buttons on the Remote Commander.

2 Press the VIEW SEL button on the Remote Commander.

The picture of the selected terminal appears on the local monitor.
The selected terminal number is displayed in the box ③.

Note

When you have not input the terminal number, a terminal which has the lowest number is first selected, and each time you press the VIEW SEL button, the picture is cyclically switched from the one which has the low number.

To broadcast a picture of the selected terminal to all the terminals

1 Enter the terminal number in the box ① in the Chair Control menu with the number buttons on the Remote Commander.

2 Press the EXEC button on the Remote Commander.

A picture of the selected terminal appears on your monitor and it is broadcast to all terminals.
The selected terminal number is displayed in the box ④.

To broadcast a picture of your terminal to all the terminals

Simply press the EXEC button on the Remote Commander, without entering the terminal number into the box ①.

A picture on your monitor is broadcast to all the terminals.
NearEnd is displayed in the box ④.
The indication ▣ appears on the monitor screen when you broadcast.

To end the chair control

Press the CANCEL button on the Remote Commander.
The MCU (Chair) Control menu disappears from the monitor screen.

Voice Meeting

The system can connect to a normal phone to hold a meeting using the sound only. **(Voice Meeting)**
The basic procedure is same as one with images and sound.

Note

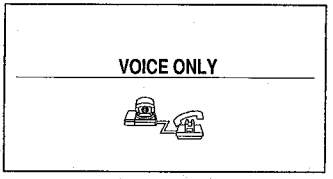
When you have installed the optional PCS-I152 LAN Board, and using a LAN, you cannot do the voice meeting.

To start a voice meeting with unregistered remote parties

Set LINE I/F to ISDN BRI (Speech) in the Dial Setup menu.

For details on the setting, see "Calling an Unregistered Remote Party" on page 25.

The indication "VOICE ONLY" appears on the monitor screen, and the local picture is displayed on the local monitor screen.



To register remote parties for holding a voice meeting

Set LINE I/F to ISDN BRI (Speech) in the Dial Setup menu.

For details on the registration, see "Calling a Registered Remote Party" on page 32.

To set the audio protocol

Set up the TELEPHONE item in the Other Setup menu.
When you call, set TELEPHONE to AUTO. This automatically sets to μ-law (NTSC); to A-law (PAL).
When you receive, the audio protocol setting is not required.

For details on the setup, see "Other Setup menu" on page 82.

Chapter 4

Registration and Setup

Registering Local Information

Before holding a meeting, you will need to register your local information on the ISDN Configuration menus, such as the local directory number. When you hold a meeting on a LAN, also set up the LAN Setup menu.

Setting Up the ISDN Configuration Menus

Note

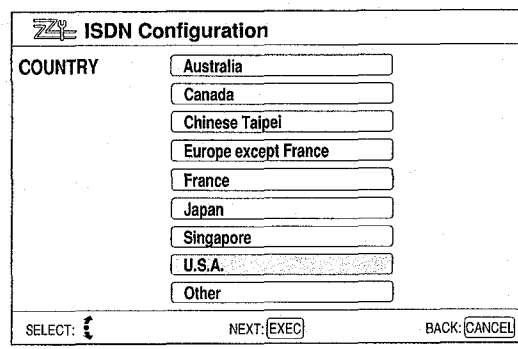
Register information in the boxes B1 to C2 if you have installed the optional PCS-I150 BRI Board.

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

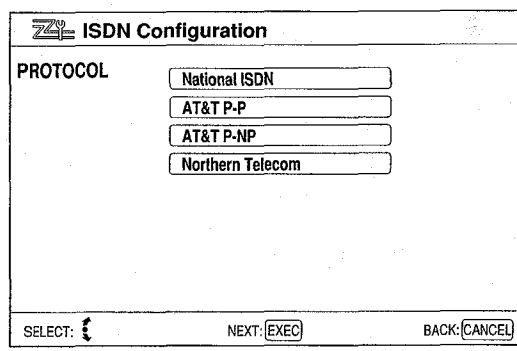
2 Select ISDN with the joy stick, then press it.

The ISDN Configuration (COUNTRY) menu appears on the monitor screen.



3 Select your country with the joy stick, then press the EXEC button.

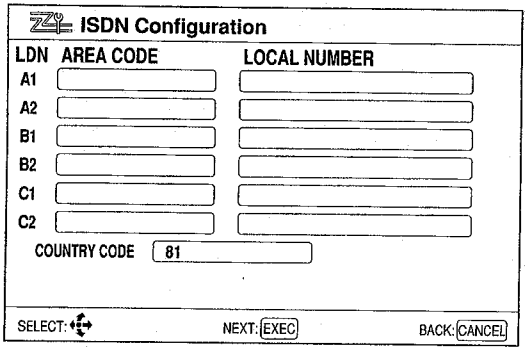
The ISDN Configuration (PROTOCOL) menu appears on the monitor screen.
(This is only for the USA and Canada.)



(Continued)

4 Select the network switch type with the joy stick, then press the EXEC button.

The ISDN Configuration (LDN) menu appears.



5 Enter your area code in the AREA CODE boxes A1 and A2.

Do not enter the first zero number of your area code. (e.g., enter only "408" for California.)

6 Enter your telephone number and sub-address (if you set your sub-address) in the LOCAL NUMBER boxes A1 and A2.

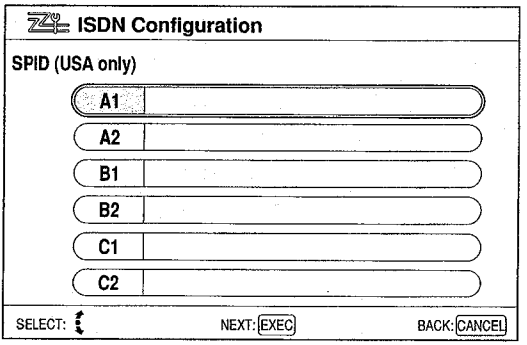
Enter the asterisk (*) after the telephone number, then enter the sub-address. You cannot use the alphabet in a sub-address.

7 Enter your country code in the COUNTRY CODE box.

(e.g., enter "1" for the USA.)

8 Press the EXEC button on the Remote Commander.

The ISDN Configuration (SPID) menu appears on the screen. (This is only for the USA and Canada.)

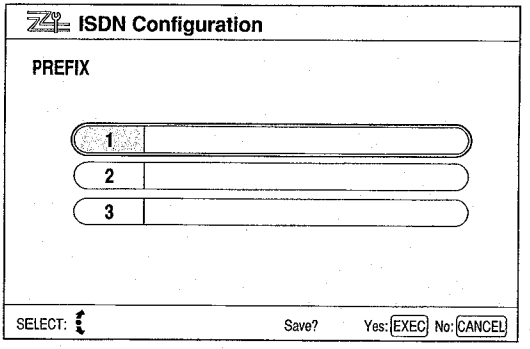


9 Set up the ISDN Configuration (SPID) menu. (This is only for the USA.)

For details on the SPID registration, see "SPID Registration for Customers in the USA" on page 66.

10 Press the EXEC button on the Remote Commander.

The ISDN Configuration (PREFIX) menu appears on the monitor screen.



(Continued)

11 Enter your prefix number in the PREFIX box if you are using a PBX (Private Branch exchange).

You can register three prefix numbers. (e.g., enter "9" if you have to dial nine to reach an outside line.)
- To select the PREFIX box, move the joy stick upward or downward.
- To set the prefix number, press the same number button as the prefix number.
- To cancel the setup, press the CANCEL button on the Remote Commander.

Note

The number input in the PREFIX box is automatically dialed before the telephone number is dialed.

12 Press the EXEC button on the Remote Commander.

The registration is completed.

To cancel the setup

Press the CANCEL button on the Remote Commander.

Setting Up the LAN Setup Menu

When you hold a meeting on a LAN, install the optional PCS-I152 LAN Board, and set up the LAN Setup menu.

Note

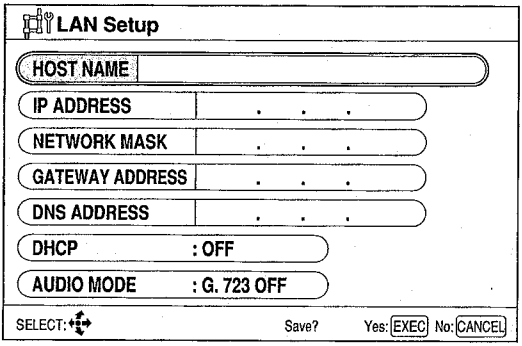
The LAN Setup menu is accessed only when the optional PCS-I152 LAN Board has been installed.

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

2 Select LAN with the joy stick, then press it.

The LAN Setup menu appears on the monitor screen.



3 Set up the following items:

HOST NAME: Enter your host name.
IP ADDRESS: Enter your IP address.
NETWORK MASK: Enter your network mask.
GATEWAY ADDRESS: Enter your default gateway address.
DNS ADDRESS: Enter your DNS (Domain Name System) server address.
DHCP: Sets up the DHCP (Dynamic Host Configuration Protocol).
OFF: Sets DHCP to OFF. When set to OFF, enter your IP address and network mask.
AUTO: Automatically gets your IP address and network mask at step **4**. Check your IP address on the Machine Information menu after you get them.
AUDIO MODE: Sets up the audio mode.
G. 723 ON: Sets G.723 to ON.
G. 723 OFF: Sets G.723 to OFF.

Note

When you have selected G.723 ON, the maximum bandwidth is 384 Kbps.

For details on the setup above, consult a person having charge of your network.

4 Press the EXEC button on the Remote Commander.

The registration is completed.

To cancel the setup

Press the CANCEL button on the Remote Commander.

SPID Registration for Customers in the USA

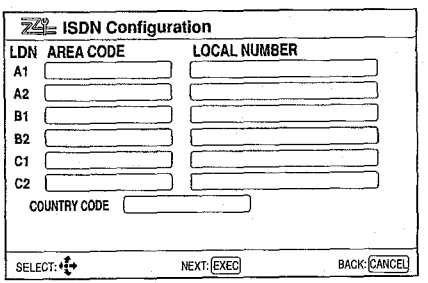
If the system is connected to a network switch of the following types, you can use ISDN lines.

- **Network switch type:** AT&T 5ESS
  Network switch software version: 5E8 or later (for National ISDN-1 and National ISDN-2)
- **Network switch type:** Northern Telecom (NTI) DMS-100
  Network switch software version: BCS34 or later (for National ISDN-1 and National ISDN-2)
- **Network switch type:** AT&T 5ESS
  Network switch software version: 5E8 or later (for Multipoint or Point-to-Point Custom ISDN)
- **Network switch type:** Northern Telecom (NTI) DMS-100
  Network switch software version: BCS34 or later (for Custom ISDN)

In these cases, you shall register the LDN (Local Directory Number: seven-digit local phone number).

Follow the steps below to register the LDN(s).

1 Display the ISDN Configuration (LDN) menu.



2 Enter your country code in the COUNTRY CODE box.

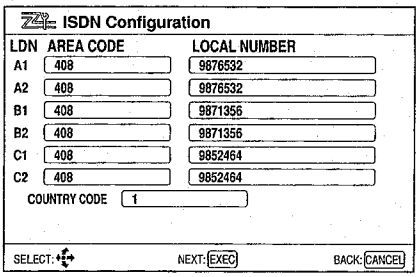
If the network switch type is AT&T 5ESS (National ISDN) or NTI DMS-100 (National ISDN)
COUNTRY CODE is "1"
If the network switch type is AT&T 5ESS (Multipoint Custom ISDN)
COUNTRY CODE is "1*10"
If the network switch type is AT&T 5ESS (Point-to-Point Custom ISDN)
COUNTRY CODE is "1*12"
If the network switch type is NTI DMS-100 (Custom ISDN)
COUNTRY CODE is "1*11"

3 Enter your LDN (s) and sub-address in the LOCAL NUMBER boxes.

If one ISDN line is used, register the LDN in the boxes A1 and A2.
If two ISDN lines are used, register the LDNs in the boxes A1, A2, B1, B2.
If three ISDN lines are used, register the LDNs in the boxes A1, A2, B1, B2, C1, C2.

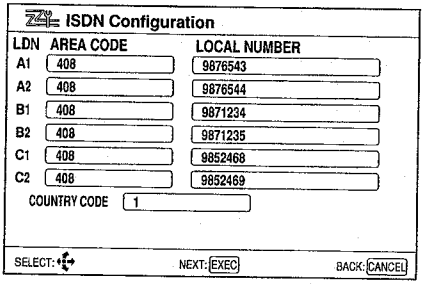
If the network switch type is AT&T 5ESS (National ISDN)
Each LDN is given for three channels (CH A1 and A2, CH B1 and B2, CH C1 and C2)
or
Each LDN is different as a separate LDN is given for each channel.

The following shows the use of three ISDN lines for AT&T 5ESS (National ISDN).
In case of each LDN is given for two channels.



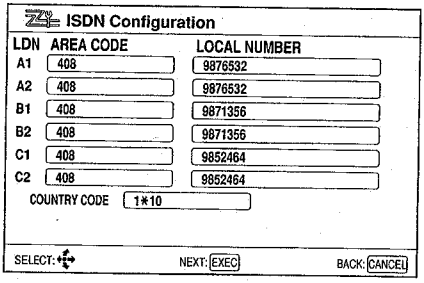
(Continued)

In case of each LDN is different as a separate LDN is given for each channel.

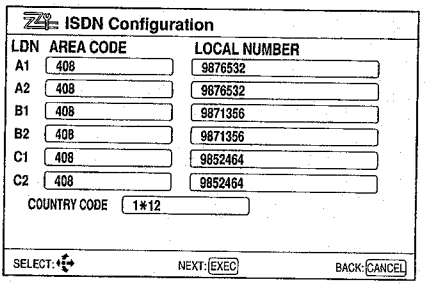


If the network switch type is AT&T 5ESS (Multipoint or Point-to-Point Custom ISDN)
Each LDN is given for three channels (CH A1 and A2, CH B1 and B2, CH C1 and C2).

The following shows the use of three ISDN lines for AT&T 5ESS (Multipoint Custom ISDN).

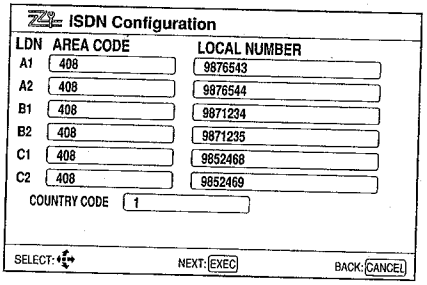


The following shows the use of three ISDN lines for AT&T 5ESS (Point-to-Point Custom ISDN).

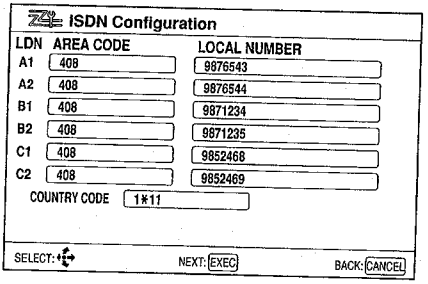


If the network switch type is NTI DMS-100 (National ISDN or Custom ISDN)
Each LDN is different as a separate LDN is given for each channel.

The following shows the use of three ISDN lines for NTI DMS-100 (National ISDN).



The following shows the use of three ISDN lines for NTI DMS-100 (Custom ISDN).



4 Press the EXEC button on the Remote Commander.

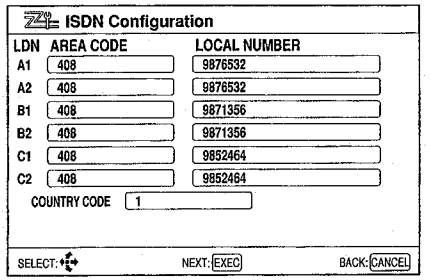
The ISDN Configuration (SPID) menu appears on the screen.

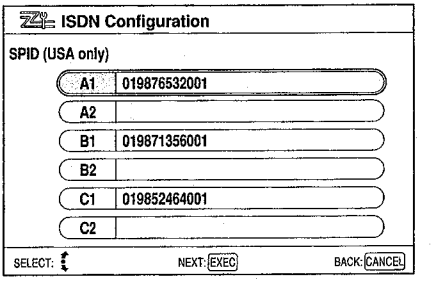
SPID in the ISDN Configuration (SPID) menu and the LOCAL NUMBER in the ISDN Configuration (LDN) menu are entered in pairs and should not be crossed with BRI channels as each has its own LDN.
Be sure to enter each number in pairs. If it is crossed, you must correct the SPID-LDN pairs.

(Continued)

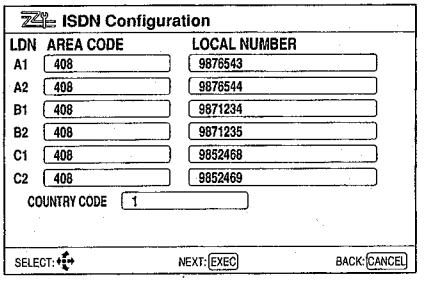
SPID Registration for Customers in the USA

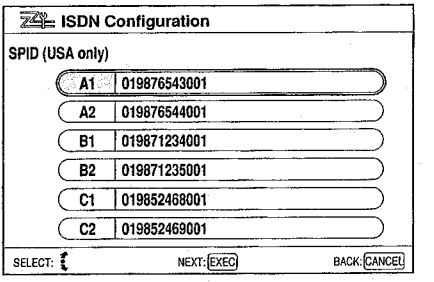
If the network switch type is AT&T 5ESS (National ISDN)
The following shows the use of three ISDN lines.
In case of each LDN is given for two channels.



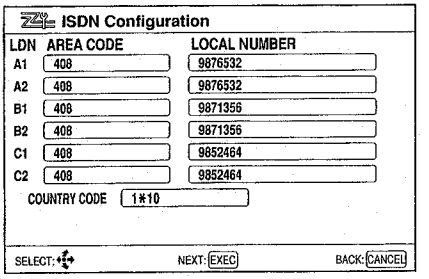


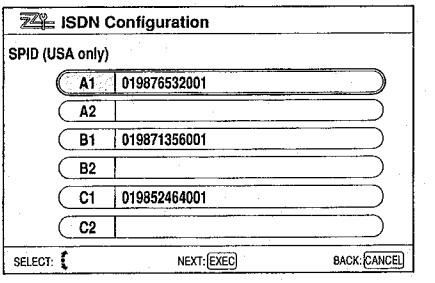
In case of each LDN is different as a separate LDN is given for each channel.



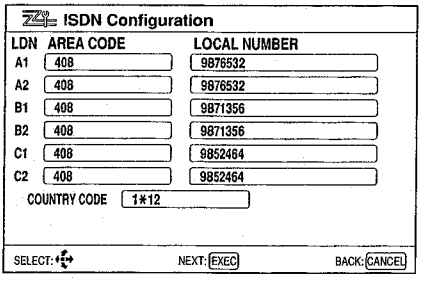


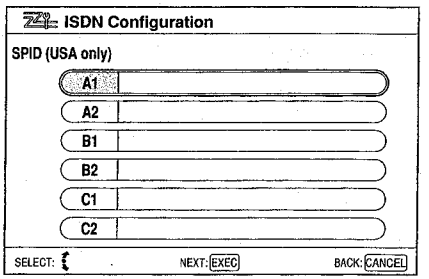
If the network switch type is AT&T 5ESS (Multipoint Custom ISDN)
The following shows the use of three ISDN lines.



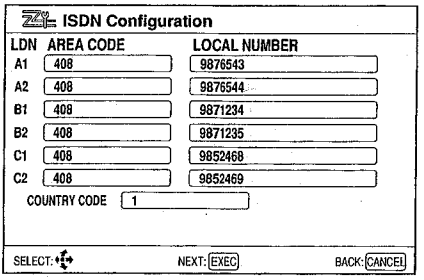


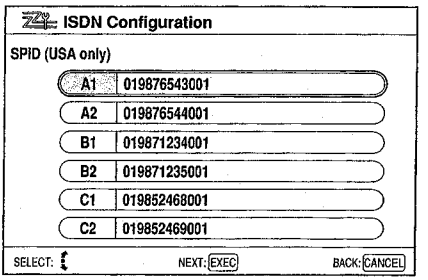
If the network switch type is AT&T 5ESS (Point-to-Point Custom ISDN)
You do not have to enter SPID.
The following shows the use of three ISDN lines.



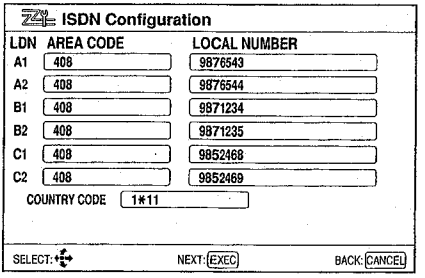


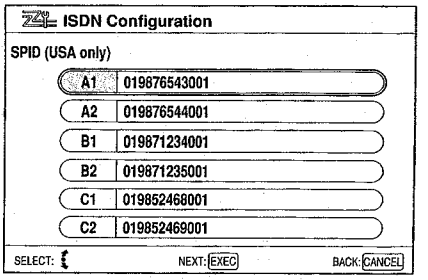
If the network switch type is NTI DMS-100 (National ISDN)
The following shows the use of three ISDN lines.





If the network switch type is NTI DMS-100 (Custom ISDN)
The following shows the use of three ISDN lines.

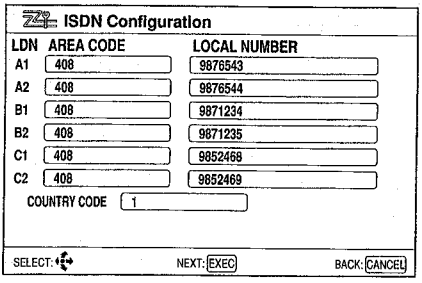


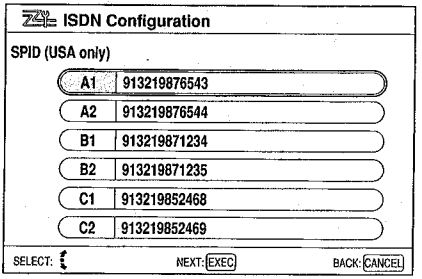


(Continued)

You should let the remote party user know the contents of your LDN. The remote party DIAL LIST and the LDN should be kept in pairs.

The following shows a setup using three ISDN lines.





5 Press the EXEC button on the Remote Commander.

The registration is completed.

Registering a Remote Party

You can register a remote party before making the connection. You can register up to 200 remote parties.

The List Input menu for connecting on a LAN is different from the one for the ISDN line. When LINE I/F in the Dial Setup menu is set to LAN, the List Input LAN menu is displayed.

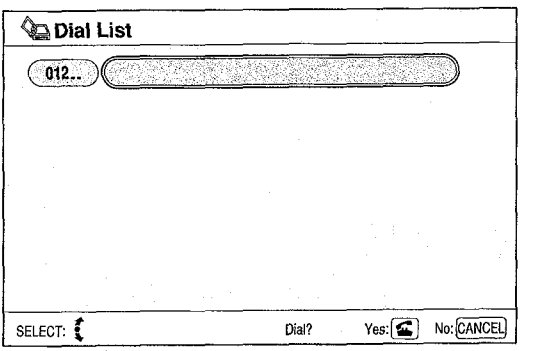
Making an Entry for Connecting With the ISDN Line

Note

Register the information in the boxes B1 to C2 when you have installed the optional PCS-I150 BRI Board to use three ISDN lines.

1 Press the LIST button, the START (◈) button, or the joy stick on the Remote Commander.

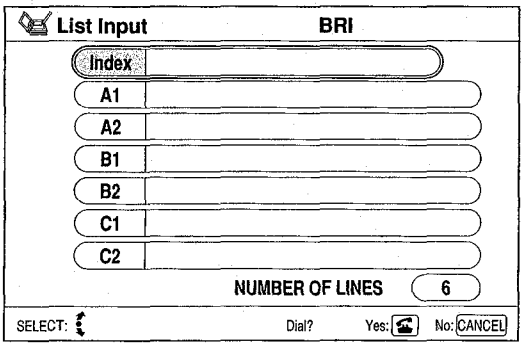
The Dial List menu appears on the monitor screen.



(Continued)

2 Press the ENTER button on the Remote Commander.

The List Input menu appears on the monitor screen.



3 Register the name of the remote party into the Index box.

For details on how to input, see "Entering Characters" on page 80.

4 Enter the telephone number and the sub-address for the remote party (if the remote party set a sub-address) in the A1 and A2 boxes.

If the remote party has multiple telephone numbers, enter the first number in the A1 box and the second number in the A2 box.
Enter the asterisk (*) after the telephone number, then enter the sub-address. You cannot use the alphabet in a sub-address.

5 Select the number of lines to be used.

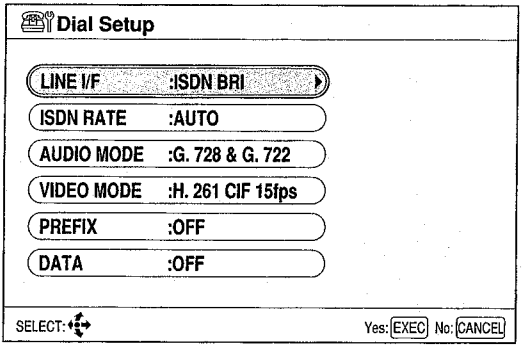
Move the joy stick downward to select the NUMBER OF LINES box, then move the joystick rightward or leftward to set the number of lines.

6 Press the ENTER button on the Remote Commander.

The name and telephone numbers (and the sub-address) are registered.

7 Press the EXEC button on the Remote Commander.

The Dial Setup menu appears on the monitor screen.



8 Set up the following items:

LINE I/F: Selects the line interface.
ISDN RATE: Selects the ISDN transfer rate.
AUDIO MODE: Selects the protocol for digital audio encoding of the audio.
VIDEO MODE: Selects the protocol for digital audio encoding of the video.
PREFIX: Selects the prefix number setting.
DATA: Selects whether to have a T.120 data meeting.

For details on each setting of the items, see "On Items in the Dial Setup Menu" on page 30.

- To select an item to be changed, select it with the joy stick on the Remote Commander, then press it.
- To set up an item, select a setting with the joy stick on the Remote Commander, then press it.
- To cancel the setup, press the CANCEL button on the Remote Commander.

(Continued)

Notes

- When using the Compact Precessor as the MCU, items below cannot be set up:
  ISDN RATE, AUDIO MODE, VIDEO MODE, DATA.
- When using a LAN, items below cannot be set up:
  ISDN RATE, PREFIX, DATA.

9 Press the EXEC button on the Remote Commander.

The List Input menu appears again.

10 Press the ENTER button on the Remote Commander.

The registration is completed, and the Dial List menu appears again.

Note

The setup in step **8** lets you make a call to a remote party.

To modify an entry

You can modify the name and telephone numbers of an entry.

1 Select the Index title to be modified in the List Input menu with the joy stick, then press it.

2 Modify the entry.

3 Return to the List Input menu, then press the EXEC button on the Remote Commander.

The entry is modified.

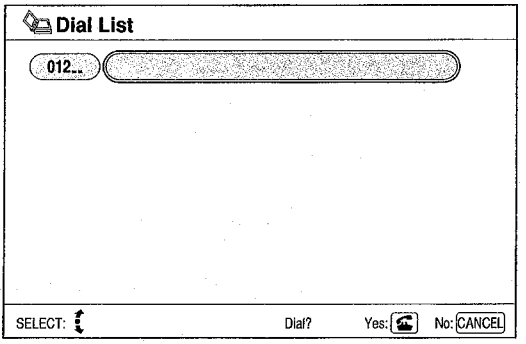
Making an Entry for Connecting on a LAN

Notes

- Meetings on a LAN are only available when the optional PCS-I152 LAN Board has been installed.
- The List Input LAN menu is displayed only when LINE I/F is set to LAN.

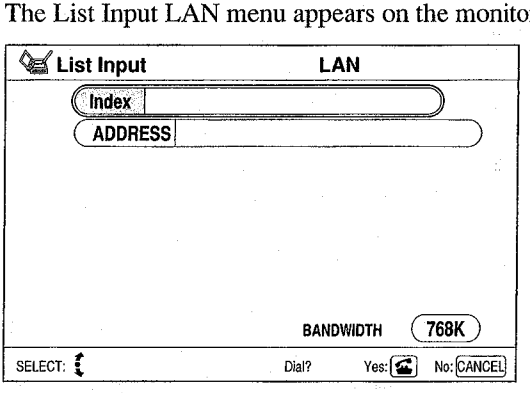
1 Press the LIST button, the START (⏀) button, or the joy stick on the Remote Commander.

The Dial List menu appears on the monitor screen.



2 Press the ENTER button on the Remote Commander.

The List Input LAN menu appears on the monitor screen.



3 Register the name of the remote party into the Index box.

For details on how to input, see "Entering Characters" on page 80.

4 Enter the IP address (or the host neme and domain name) of the remote party.

You can enter a dot by moving the joy stick on the Remote Commander to the right.

5 Select the bandwidth.

Move the joy stick down to select the BANDWIDTH box, then move the joy stick on the Remote Commander to the right or left to set the bandwidth.

6 Press the ENTER button on the Remote Commander.

The name and telephone numbers (and the sub-address) are registered.

7 Press the EXEC button on the Remote Commander.

The Dial Setup menu appears on the monitor screen.

8 Follow steps **7** to **10** on pages 75 and 76.

Deleting Registered Remote Parties

You can delete a registered entry as follows.

1 Press the LIST button, the START (⏀) button, or the joy stick on the Remote Commander.

The Dial List menu appears on the monitor screen.

2 Select the Index title to be deleted with the joy stick.

3 Press the CLEAR button on the Remote Commander.

The indication "Clear Are you sure?" appears on the monitor screen.

4 Press the EXEC button on the Remote Commander.

The selected Index entry is deleted.

To cancel deleting

Press the CANCEL button on the Remote Commander in step **4**.

Duplicating the Setting of the Dial List Menu

Select the Index box you want to duplicate its setting in the Dial List menu, and press the LINE COPY button on the Remote Commander. The menu changes to the List Input menu, and "XXXX-2" appears in the Index box. Since the setting has been duplicated, you can use it with a little modification.

Notes on Registration

General note

If ISDN RATE of the remote party is set to 56K in the Dial Setup menu, the connection will be made at 56 Kbps even if you set ISDN RATE to AUTO in the Dial Setup menu.

Note on the optional PCS-I150 BRI Board

If you have installed the optional PCS-I150 BRI Board, you can use three ISDN lines (up to 6B channels). In this case, register second telephone number in the B1 and B2 boxes, and third telephone number in the C1 and C2 boxes.

Note on the optional PCS-I151 V.35 Board

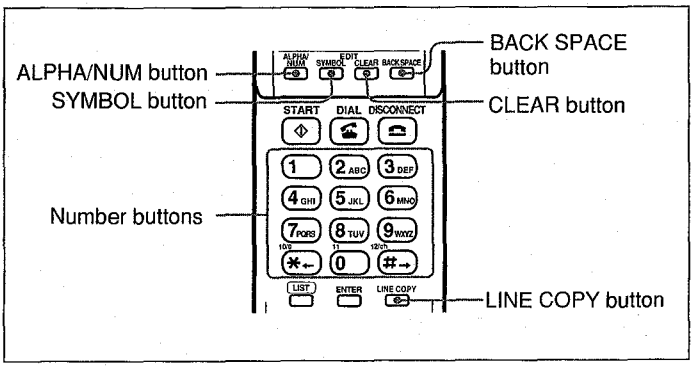
If the optional PCS-I151 V.35 Board has been installed, and connect to a private line or a terminal adaptor via the V.35 interface, select V.35 (with RS-366) or V.35 (without RS-366) in LINE I/F, and enter as follows:

- When not using RS-366, select V.35 (without RS-366). Do not enter the telephone numbers.
- When using RS-366, select V.35 (with RS-366). Enter the the telephone numbers.
- You do not need to set up ISDN RATE.

To change the ISDN transfer rate temporarily

The Compact Processor is set to 64 Kbps for an ISDN line at factory. However, some countries (e.g., the USA) or regions may have 64 Kbps and 56 Kbps ISDN transfer rates. If the remote party has set its transfer rate to 56 Kbps, you need to set your system to 56 Kbps to communicate with that system. Before making a call to such a party, set ISDN RATE to 56K in the Dial Setup menu.

Entering Characters



To switch the input mode

Press the ALPHA/NUM button on the Remote Commander repeatedly to switch the input mode.
The input mode indication appears on the monitor screen as follows:

ALPHA: The alphabet input mode is selected.
(No indication): The number input mode is selected.

To enter characters

Press the number buttons on the Remote Commander to enter the desired character. Each time you press the button, the character is input from among the alphabets on each button, or the numbers on each.
To enter special characters (symbols), press the SYMBOL button repeatedly to select a desired character.

To copy the number

Press the LINE COPY button or the joy stick on the Remote Commander. The number in the box above is copied to the next box.

To delete a character

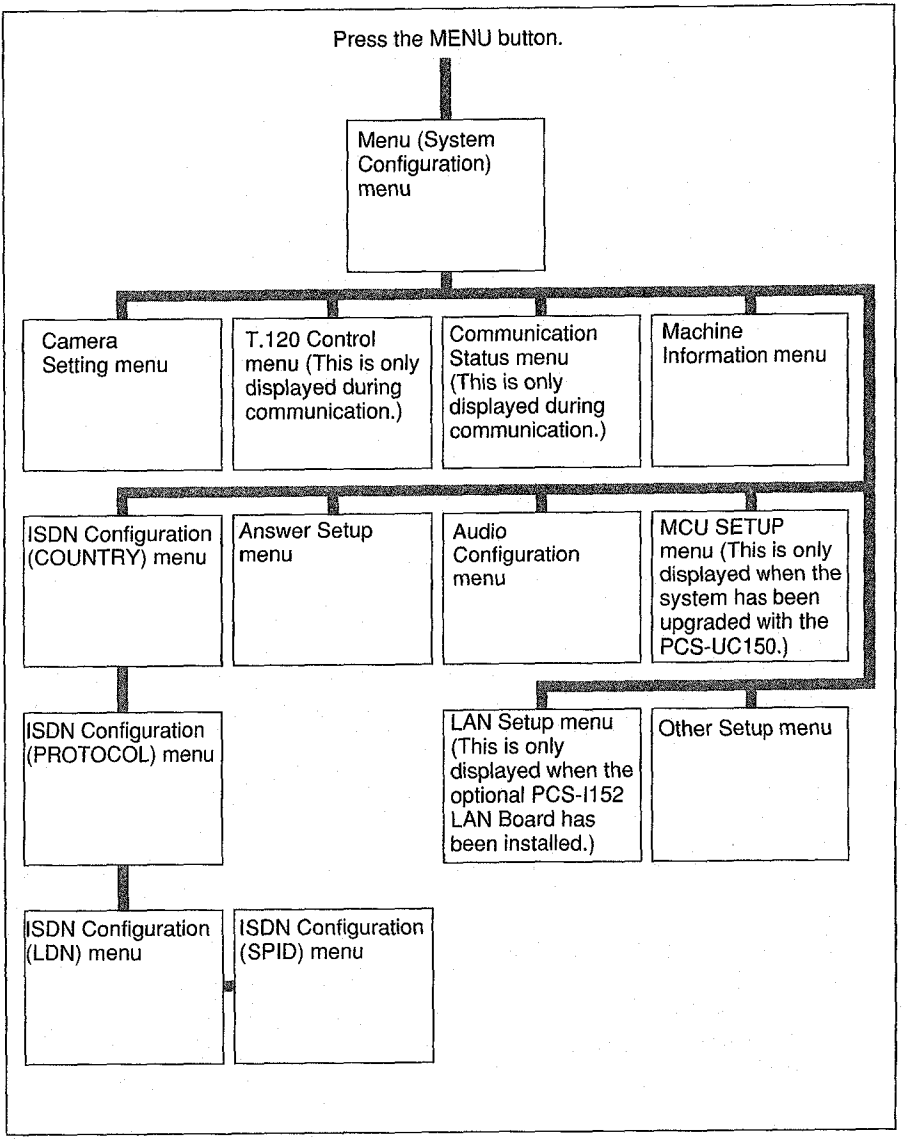
Press the BACK SPACE button on the Remote Commander, or shift the joy stick to the left. The last entered character is deleted.

To delete all characters in a box

Move the cursor to the box where you want to delete the entry, then press the CLEAR button on the Remote Commander.

Displaying the Menu

Press the MENU button on the Remote Commander, the Menu (System Configuration) menu appears on the monitor screen. The menu switches as follows:


Press the MENU button.
Menu (System Configuration) menu
Camera Setting menu
T.120 Control menu (This is only displayed during communication.)
Communication Status menu (This is only displayed during communication.)
Machine Information menu
ISDN Configuration (COUNTRY) menu
Answer Setup menu
Audio Configuration menu
MCU SETUP menu (This is only displayed when the system has been upgraded with the PCS-UC150.)
ISDN Configuration (PROTOCOL) menu
LAN Setup menu (This is only displayed when the optional PCS-I152 LAN Board has been installed.)
Other Setup menu
ISDN Configuration (LDN) menu
ISDN Configuration (SPID) menu

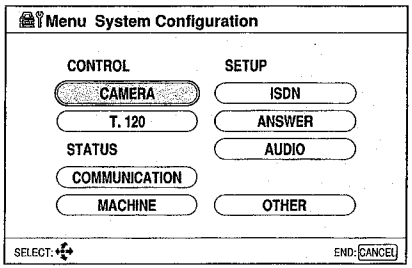
Menu Settings

For details on the following menus, see the following pages.

Communication Status menu: page 37
Dial List menu: page 32
ISDN Configuration menus: page 61
LAN Setup menu: page 65
List Input menu: page 74
List Input LAN menu : page 77
Manual Dial menu: page 26
Manual Dial LAN menu: page 29
MCU (Chair) Control menu: page 56
MCU SETUP menu: page 98
T.120 Control menu: page 95

Menu (System Configuration) menu

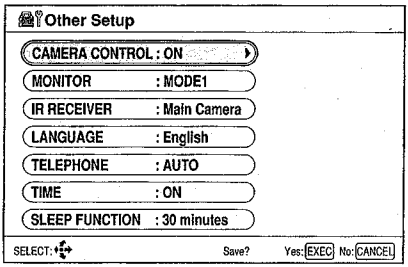
Switches the menu.



CAMERA: Switches to the Camera Setting menu.
T.120: Switches to the T.120 Control menu. (Only during communication)
COMMUNICATION: Switches to the Communication Status menu. (Only during communication)
MACHINE: Switches to the Machine Information menu.
ISDN: Switches to the ISDN Configuration (COUNTRY) menu.
ANSWER: Switches to the Answer Setup menu.
AUDIO: Switches to the Audio Configuration menu.
LAN: Switches to the LAN Setup menu. (Only when the optional PCS-I152 LAN Board has been installed)
MCU: Switches to the MCU SETUP menu. (Only when the system has been upgraded with the PCS-UC150)
OTHER: Switches to the Other Setup menu.

Other Setup menu

Sets up the system.



CAMERA CONTROL: Selects the far end camera control protocol.
ON: Operates the far end camera with based on Recommendation H.281.
OFF: Does not operate the far end camera.

MONITOR: Selects the remote control mode of the IR repeater. Normally, set it to MODE1 (PCS-1500) or to MODE3 (PCS-1500P).
MODE1: Sets it to mode 1.
MODE2: Sets it to mode 2.
MODE3: Sets it to mode 3.
MODE4: Sets it to mode 4.

IR RECEIVER: Selects the remote sensor. Normally, set it to Main Camera.
Main Camera: Activates the remote sensor on the camera.
Body: Activates the remote sensor on the Compact Processor.

LANGUAGE: Selects the language of the messages.
English: Displays messages in English.
French: Displays messages in French.
German: Displays messages in German.
Japanese: Displays messages in Japanese.
Spanish: Displays messages in Spanish.
Italian: Displays messages in Italian.

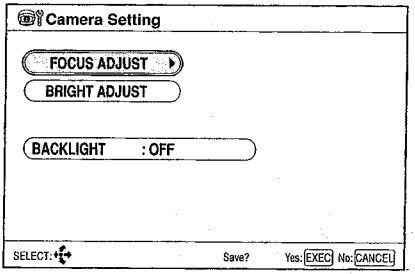
TELEPHONE: Selects the audio protocol for the voice meeting.
AUTO: Selects the protocol automatically.
G.711 μ-law: Selects the μ-law protocol.
G.711 A-law: Selects the A-law protocol.

TIME: Selects whether to display the elapsed time.
ON: Displays the elapsed time.
OFF: Does not display the elapsed time.

SLEEP FUNCTION: Selects the time that the unit turns into sleep mode.
OFF: Does not turns into sleep mode.
10 MINUTES: Sets the time to 10 minutes.
30 MINUTES: Sets the time to 30 minutes.
60 MINUTES: Sets the time to 60 minutes.

Camera Setting menu

Sets up the camera.



FOCUS ADJUST: Selects auto focus or manual focus.
AUTO: Focuses automatically.
MANUAL: Focuses manually. When selecting MANUAL, adjust it by selecting **FAR** or **NEAR**.

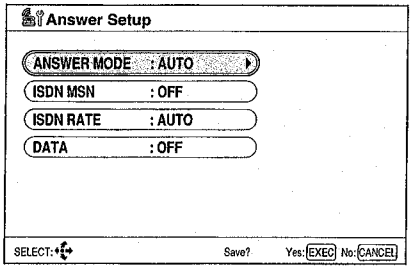
BRIGHT ADJUST: Selects whether to adjust the camera brightness manually or automatically.
AUTO: Adjusts the brightness automatically.
MANUAL: Adjusts the brightness manually. When selecting MANUAL, adjust it by selecting **BRIGHT** or **DIM**.

BACKLIGHT: Turns on/off the backlight function.
OFF: Turns off the backlight function.
ON: Turns on the backlight function.

DATA: Selects whether or not to have a T.120 data meeting.
T.120: Holds a T.120 data meeting.
OFF: Does not hold a T.120 data meeting.

Answer Setup menu

Sets up the communication items for receiving.



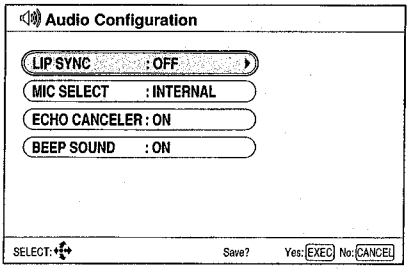
ANSWER MODE: Selects the answer mode.
AUTO: Answers calls in auto answer mode.
MANUAL: Answers calls in manual answer mode.

ISDN MSN: Selects whether you are using the Multiple Subscriber Number.
ON: When you are using the Multiple Subscriber Number.
OFF: When you are not using the Multiple Subscriber Number.

ISDN RATE: Selects the transfer rate via the ISDN line.
AUTO: Normally, select this setting.
56K: Selects this setting when you call a region or country via the 56 Kbps transfer rate.

Audio Configuration menu

Sets up the audio system.



LIP SYNC: Selects whether you use the lip synchronization function.
ON: Activates the lip synchronization function.
OFF: Deactivates the lip synchronization function.

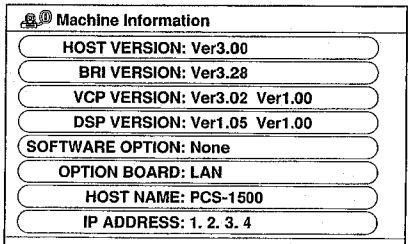
MIC SELECT: Selects the microphone to be used.
INTERNAL: Uses the built-in microphone.
EXTERNAL: Uses the optional PCS-A300 Microphone (s).

ECHO CANCELER: Selects whether you use the echo canceler inside the Compact Processor.
OFF: Deactivates the echo canceler.
ON: Activates the echo canceler.
EXTERNAL: When using the echo canceler equipped with the external equipment.

BEEP SOUND: Selects whether to sound the beep when you press the buttons on the Remote Commander.
ON: Activates the beep sound.
OFF: Deactivates the beep sound.

Machine Information menu

Displays the version and installed option of the Compact Processor



HOST VERSION: Displays the host version.
BRI VERSION: Displays the BRI version.
VCP VERSION: Displays the VCP version.
DSP VERSION: Displays the audio DSP version.
SOFTWARE OPTION: Displays the optional software installed into the unit.
None: The optional software has not been installed.
MCU: The PCS-UC150 Upgrade Kit has been installed.
OPTION BOARD: Displays the optional board installed into the unit.
None: The optional board has not been installed.
2BRI: The PCS-I150 BRI Board has been installed.
V.35: The PCS-I151 V.35 Board has been installed.
LAN: The PCS-I152 LAN Board has been installed.
HOST NAME: Displays the host name.
IP ADDRESS: Displays the IP address.

Chapter 5

Meetings With Optional Equipment

Installing the Optional Board

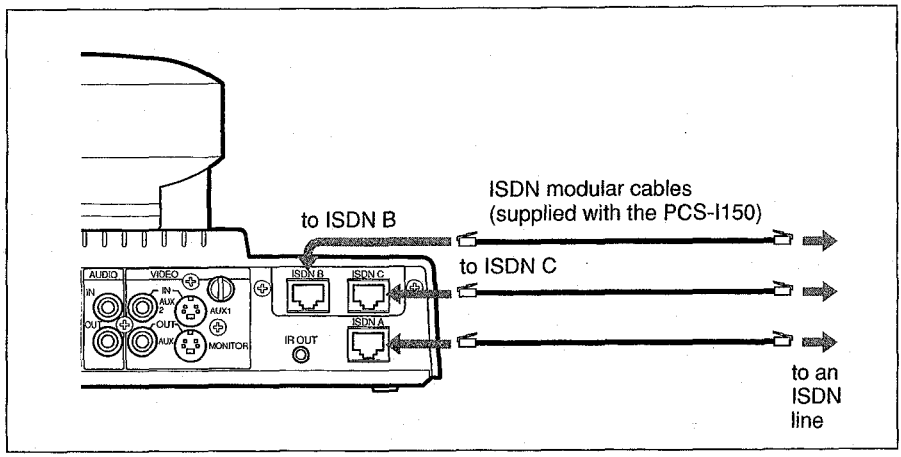
You need to install the optional board to connect via three ISDN lines, via the V.35 interface, or on a LAN.

For details on the installation of optional Boards, consult your Sony dealer.

Board	Function
PCS-I150 BRI Board	Connects via three ISDN lines. When using this unit that has been upgraded with the PCS-UC150 as the MCU (Multipoint Control Unit), this board is required.
PCS-I151 V.35 Board	Connects via the V.35 interface.
PCS-I152 LAN Board	Connects on a LAN.

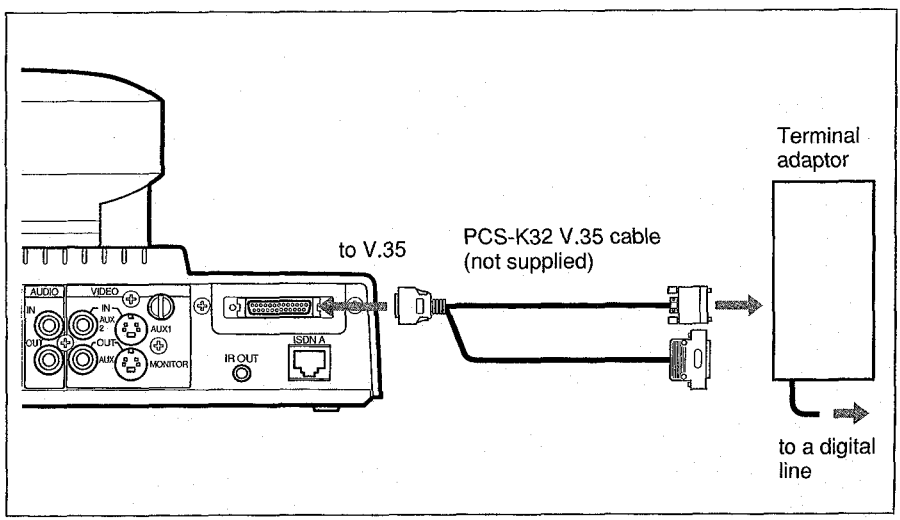
Using Three ISDN Lines

You need to install the optional PCS-I150 BRI Board. You can connect with 6B channels.



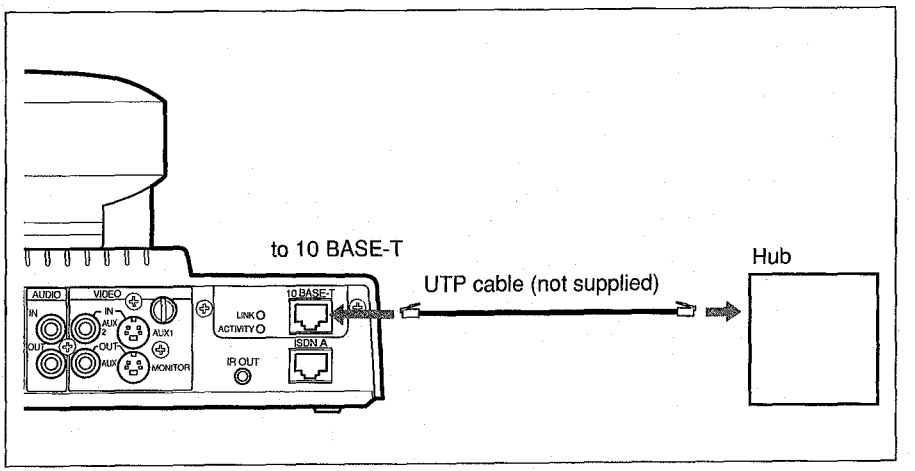
Using the V.35 Interface

You need to install the optional PCS-I151 V.35 Board. You can connect via the V.35 interface.



Using a LAN

You need to install the optional PCS-I152 LAN Board. You can connect on a LAN. Use the UTP cable (category three or more).



On the lamps on the LAN board

The lamps on the LAN board function as follows:

LINK: lights up when the connected hub is turned on.

ACTIVITY: flashes when sending/receiving the data.

Using Optional Microphones

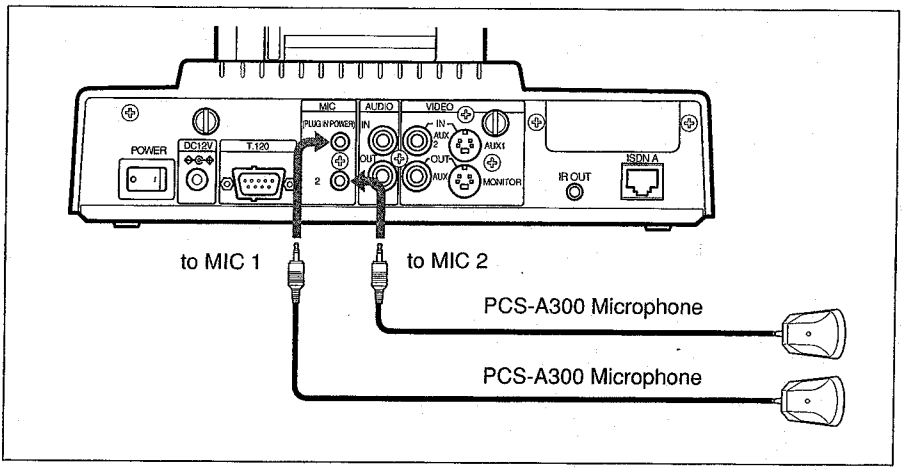
The Compact Conference Package is designed to accommodate three participants at one terminal. You can add the optional PCS-A300 Microphones to allow for more participants.

Notes

- Set MIC SELECT to EXTERNAL in the Audio Configuration menu.
- The built-in microphone is not activated after connecting the external microphone.

Connecting the Microphone

You can add two microphones. Power for the microphone is provided from the Compact Processor.



Notes on installing the PCS-A300 Microphone

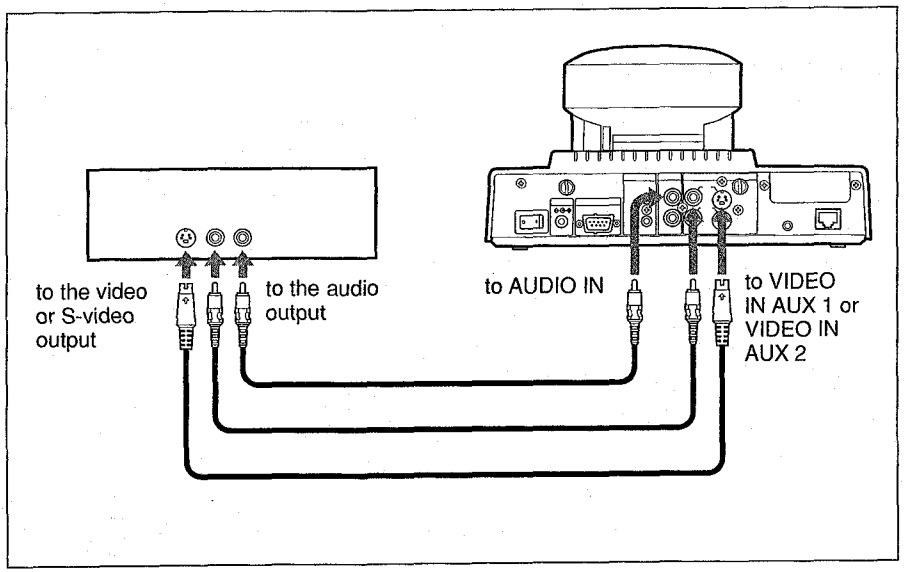
- Install the microphone at a half meter apart from participants.
- Install the speaker in direction of the rear of the microphones.
- Install the microphone in a quiet, echo-free room.
- Install the microphone away from potential noise sources.
- Do not place a sheet of paper over the microphone or move the microphone since reflecting echoes to a remote party may increase temporarily. It needs an input audio signal for a couple of seconds to settle down the reflecting echoes.

Using the External Equipment

The Compact Processor can connect two external video equipment for input; two equipment for output (including the TV monitor).

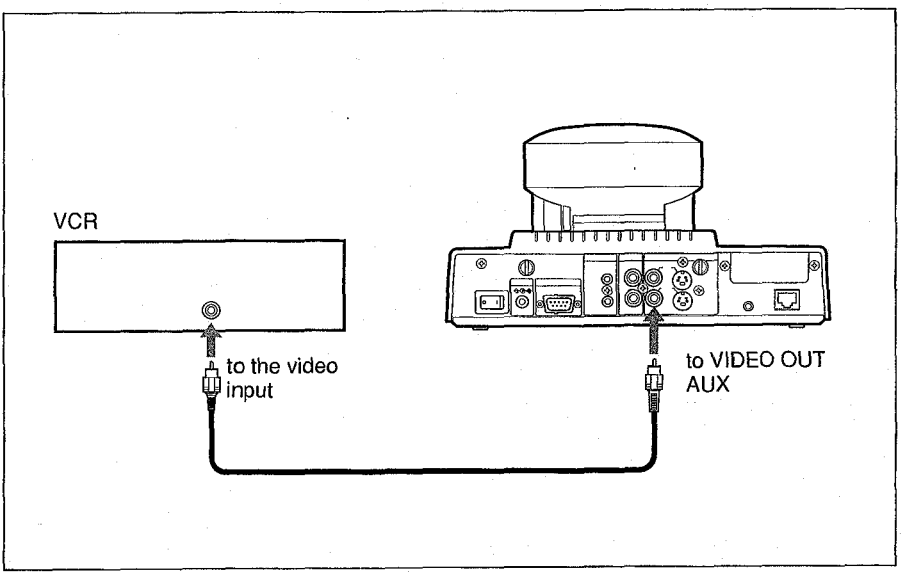
Connecting External Video Equipment for Input

Connect video equipment, such as a VCR. The system is equipped with two video inputs and one audio input.



Connecting External Equipment for Output

You can connect external video equipment for output, such as a VCR, besides the TV monitor.



Holding a T.120 Data Conference

You can have a data conference based on ITU-T Recommendation, T.120 standards when you connect a PC which NetMeeting (not supplied) has been installed with the Compact Processor.
Use only NetMeeting version 2.1 or 2.11.

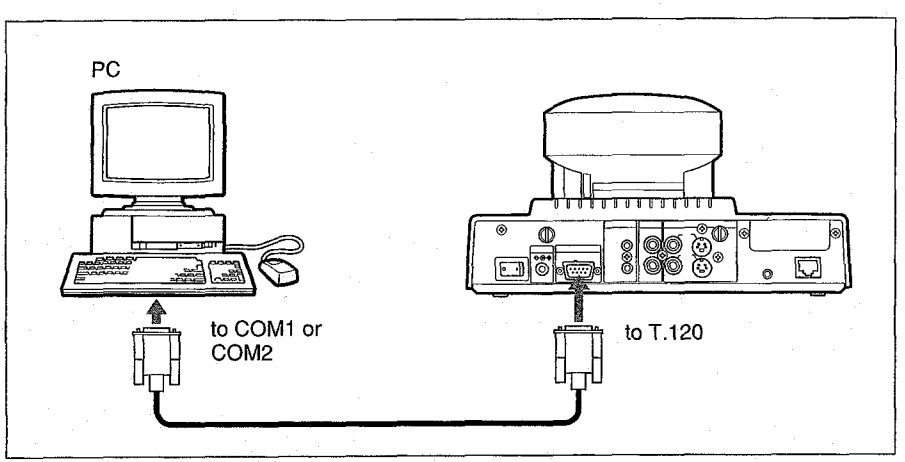
NetMeeting is a registered trademark of Microsoft Corporation.

Notes

- When you have installed the optional PCS-I152 LAN Board, and using on a LAN, you cannot hold a T.120 data conference.
- When you use the Compact Processor as the MCU, you cannot hold a T.120 data conference.

Connecting With a PC

Connect the COM1 serial port of your PC and the T.120 connector on the Compact Processor using the RS-232C cross cable (9-pin (female) ⟷ 9-pin (female)).
When the COM1 port is already being used, such as a mouse, connect to COM2 port and change the COM port setting of the NetMeeting.



To install NetMeeting

Follow the explanation in the NetMeeting file to install NetMeeting in your PC.

Setting Up the Compact Processor

When you call a remote party to hold a data conference
Set DATA to T.120 in the Dial Setup menu.

When you receive a call from a remote party to hold a data conference
Set DATA to T.120 in the Answer Setup menu.

Note

We recommend to set AUDIO MODE to G.728 & G.722 in the Dial Setup menu.

Setting Up NetMeeting

1. Select [NetMeeting] from the start pop-up menu or click on the NetMeeting icon.
2. Select [Option] from the [Tools] menu.
3. Select [Protocols] tab, then click "Null Modem."
4. Click on the [Properties] button, then select the COM port to be used.
5. Click on the [Properties] button, then set the transfer rate to "115200."

   Verify the following settings.
   Data bits: 8, Parity: None, Stop bit: 1, Flow control: None
6. Click on the [OK] button repeatedly until the menu returns to its first one.

Connecting with NetMeeting

1 Set the Compact Processor to be on line.

Check that the indication "T.120" appears on the screen.

2 Click on [Calling] at both local and remote.

3 Set [Address] in the [New call] dialog box to COM1 or COM2, and [Call Using] to Null Modem.

4 Click on the [Call] button.

Soon, the connection is established.

For details on how to use, refer to the NetMeeting file and the Help menu.

On data transfer rate

The Compact Processor is compatible with the following transfer rate: MLP 6.4 Kbps, 24 Kbps, 32 Kbps, HMLP 62.4 Kbps, and 64 Kbps.

Suspending the T.120 Data Conference Temporarily

The wider video bandwidth is assigned during suspension.

1 Press the MENU button on the Remote Commander.

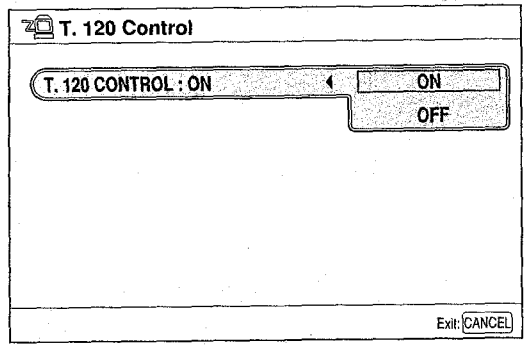
The Menu (System Configuration) menu appears on the monitor screen.

2 Select T.120 with the joy stick, then press it.

The T.120 Control menu appears on the monitor screen.

3 Select T.120 CONTROL with the joy stick, then press it.

The T.120 CONTROL items appear.



4 Select OFF with the joy stick, then press it.

The T.120 data conference is temporarily suspended.

5 Press the CANCEL button on the Remote Commander twice.

The menu disappears from the monitor screen.

To hold the T.120 data conference again

Select ON in step **4**, and connect again from NetMeeting.

Note

This function may not work properly with terminals other than Sony.

Chapter 6

Meetings With the Upgrade Kit

Features

The optional PCS-UC150 Upgrade Kit is designed to add the MCU function to the PCS-1500/1500P Compact Conference Package.
You can hold an MCU conference based on the ITU-T Recommendation, H.231 standard.

Note

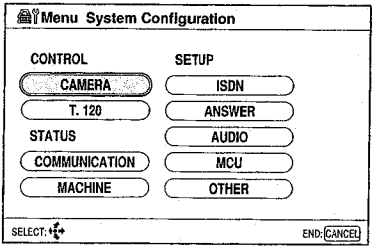
The PCS-I150 BRI Board is also required for holding a point to multi-point meeting. (However, you can only install the MCU function without the PCS-I150 BRI Board.)

Checking the System Is Upgraded

Check that the system has been properly upgraded as follow the steps below.
Also, check that the serial number sticker is placed on the bottom of the Compact Processor.
If the sticker is not placed, consult your Sony dealer.

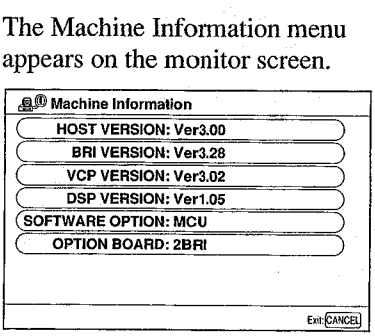
1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.



2 Select MACHINE with the joy stick on the Remote Commander, then press the stick.

The Machine Information menu appears on the monitor screen.



3 Check that Software Option is set to MCU.

When it is set to MCU, upgrade is completed. If it is not set to MCU, consult your Sony dealer.

4 Press the CANCEL button on the Remote Commander twice.

The menu disappears from the monitor screen.

Notes

- Upgrade operation is only for qualified personnel.
- This card can be installed only once. The card which has been already installed into another Compact Processor cannot be used. Installed functions cannot be removed.

Preparing a Point to Multi-Point Meeting

Set up the MCU SETUP menu before holding a point to multi-point meeting.

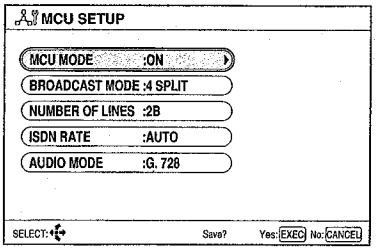
Setting Up the MCU SETUP Menu

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

2 Select MCU with the joy stick, then press the stick.

The MCU SETUP menu appears on the monitor screen.



3 Set up the following items:

MCU MODE: Set to ON when holding a point to multi-point meeting.
BROADCAST MODE: Selects the broadcast mode.
NUMBER OF LINES: Selects the number of lines to be used.
ISDN RATE: Selects the transfer rate.
AUDIO MODE: Selects the protocol for the audio encoding.

4 Press the EXEC button on the Remote Commander.

The settings are completed.

5 Press the CANCEL button on the Remote Commander.

The menu disappears from the monitor screen.

To hold a normal conference

Set MCU MODE to OFF in step **3**.

On items in the MCU SETUP menu

The settings for the MCU SETUP menu are as follows:

MCU MODE
ON: Holds a Point to multi-point meeting.
OFF: Holds a normal meeting.

BROADCAST MODE
4SPLIT: Displays each party on the four-split screen.
VOICE ACTIVATE: Detects the terminal that speaks at the highest level among the connected terminals, and sends the picture to all the terminals.

You can also switch the broadcast mode during a meeting with the MULTI/AUTO button on the Remote Commander.

For details on switching the broadcast mode, see "Switching the Broadcast Mode" on page 102.

NUMBER OF LINES

2B: Connects via 2B-channel.

1B: Connects via 1B-channel.

ISDN RATE

AUTO: Connects to a remote party with a normal ISDN line.

56K: Connects to a region or country with the 56 Kbps ISDN transfer rate.

AUDIO MODE

G.711: When not using G.722 and G.728.

G.722: The audio bandwidth is wider for better sound quality. (7 kHz)

G.728: The audio bandwidth is narrow but the image quality is better. (3.4 kHz)

Notes

- The settings in the MCU SETUP menu are only available when the MCU MODE is set to ON.
- If the terminal that is not adequate for the setting in the MCU SETUP menu is connected, see "Notes on Secondary Terminals" on page 106.

Starting a Point to Multi-Point Meeting

You can hold a point to multi-point meeting among four terminals (including this terminal). You can add one normal audio phone in the network.

Note

Before you start a meeting verify that MCU MODE is set to ON in the MCU SETUP menu.

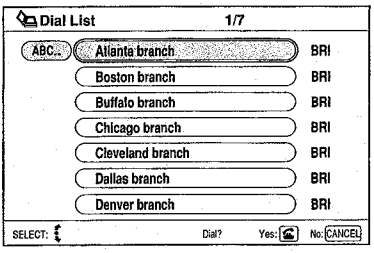
For details on registration on the Dial List menu, see "Registering a Remote Party" on page 73.

Calling Remote Parties

To call registered remote parties

1 Press the LIST button, the START (◈) button, or the joy stick on the Remote Commander.

The Dial List menu appears on the monitor screen.



2 Select a index title (the first remote party) with the joy stick on the Remote Commander.

3 Press the DIAL (☎) button on the Remote Commander.

The system dials the selected remote party in step **2**, and the indication "Dialing" appears on the monitor screen.
When the connection is completed, the indication "MEETING STARTS!" appears on the monitor screen.

4 Repeat steps **1** to **3** to connect with the second and third parties.

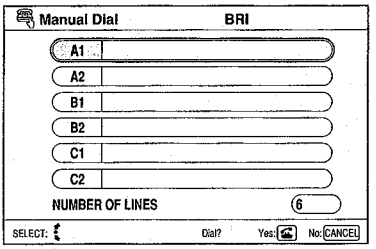
Note

When connecting to the remote party that is set to be connected via 3B-channel or more, the system only dials the number in the A1 box, or the ones in the A1 and A2 boxes.

To call unregistered remote parties

1 Press the DIAL (☎) button or one of the number buttons (0 – 9) on the Remote Commander.

The Manual Dial menu appears on the monitor screen.



2 Enter the telephone number of the first remote party to have a meeting with in the A1 and A2 boxes (when NUMBER OF LINES is set to 1B, only in the A1 box).

3 Press the DIAL (☎) button on the Remote Commander.

The system dials the number that is input in step **2**, and the indication "Dialing" appears on the monitor screen.
When the connection is completed, the indication "MEETING STARTS!" appears on the monitor screen.

4 Repeat steps **1** to **3** to connect the second and third parties.

To hold a meeting with registered remote parties and unregistered parties mixed

Follow steps **1** to **3** of "To call registered remote parties" and steps **1** to **3** of "To call unregistered remote parties" according to whether the party is registered.

Receiving Calls

The procedure is same as a normal meeting.

For details on the procedure, see "Receiving a Call" on page 34.

Notes on Point to Multi-Point Meetings

See also "The Attribute" on page 107.

- The chair control is only available from this terminal. Remote parties cannot operate it.
- This system does not support multiplex MCU connections.
- The number of lines is set to two when ISDN is set to 2B; is set to one when set to 1B. This is regardless of the setting in the Dial List menu.
- One ISDN jack can connect with only one terminal. Even if you connect via 1B-channel, the number of reomte parties is up to three.
- This system does not support connections via the Inverse Multiplexer interface (BONDING).

Operating Chair Controls

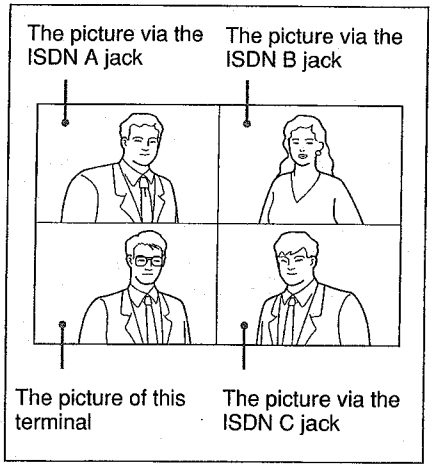
You can do the following operations during a meeting.

Switching the Broadcast Mode

There are two broadcast modes:

4SPLIT mode

Displays each party on the four-split screen.



VOICE ACTIVATE mode

Detects the terminal that speaks at the highest level among the connected terminals, and sends the picture to all the terminals. The indication V.A. appears at the lower-left on the monitor screen in VOICE ACTIVATE mode.
The indication ▣ appears on the monitor screen in VOICE ACTIVATE mode.

The default broadcast mode when starting a meeting is according to the setting in the MCU SETUP menu. Each time you press the MULTI/AUTO button on the Remote Commander, the mode is switched between the 4SPLIT mode and the VOICE ACTIVATE mode.

Selecting the Picture to be Broadcast

You can manually select the picture to be broadcast. Once you select the picture, both the broadcast modes are canceled, and the selected picture is displayed on each screen at full-size.

Press the VIEW SEL button on the Remote Commander repeatedly. Each time you press the button, the picture is switched among the connected terminals.
The alphabet A, B, or C is added on the indication ▣. This indicates the terminal being broadcast. The indication ▣ without the alphabet indicates that the picture of the local terminal is being broadcast.

To go into broadcast mode

Press the MULTI/AUTO button on the Remote Commander. The system returns to the 4SPLIT mode or the VOICE ACTIVATE mode.

Verifying the Picture Shot by the Local Camera

You can display the local picture only on your screen in VOICE ACTIVATE mode; the other terminals are still in VOICE ACTIVATE mode.

Press the DISPLAY FAR/NEAR button on the Remote Commander. The local picture is displayed only on your screen.

To return to the VOICE ACTIVATE mode

Press the DISPLAY FAR/NEAR button on the Remote Commander again.

Receiving the Broadcast Request

When you receive the command "MCV*" from the connected terminal, the picture of that terminal is automatically broadcast. If the meeting is held in VOICE ACTIVATE mode, the mode is canceled, and the picture is broadcast at full-size.
When you receive the command "MCV CANCEL," the system returns to the previous mode.

* One of the commands that is sent to the MCU from the slave terminal.

Note

If you have received the command "MCV" from other terminal, or you have manually selected the picture to be broadcast, the command "MCV" is rejected.

Checking the Connection Status

1 Press the MENU button on the Remote Commander.

The Menu (System Configuration) menu appears on the monitor screen.

2 Select COMMUNICATION with the joy stick on the Remote Commander, then press the stick.

The COMMUNICATION STATUS menu appears on the monitor screen.

Communication Status

	A		B		C	
LINE I/F	BRI		BRI		BRI	
ISDN RATE	2 x 64K		2 x 64K		2 x 64K	
	(Encode)	(Decode)	(Encode)	(Decode)	(Encode)	(Decode)
AUDIO MODE	G. 728	G. 728	G. 728	G. 728	G. 728	G. 728
VIDEO MODE	H. 261 CIF	H. 261 CIF	H. 261 CIF	H. 261 CIF	H. 261 CIF	H. 261 CIF
PRAME RATE	15fps	15fps	15fps	15fps	15fps	15fps

Exit: CANCEL

3 Check the communication status:

The column A indicates the status via the ISDN A jack; B indicates via the ISDN B jack; C indicates via the ISDN C jack. And the column ENCODE indicates the status being sent, the columns DECODE indicate the status being received.

LINE I/F: Displays the line interface being used.
ISDN RATE: Displays the number of lines and the transfer rate being used.
AUDIO MODE: Displays the audio encoding system.
VIDEO MODE: Displays the video encoding system.
FRAME RATE: Displays the maximum rate of the motion picture.

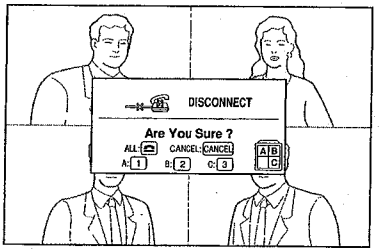
4 Press the CANCEL button on the Remote Commander twice.

The menu disappears from the monitor screen.

Ending a Point to Multi-Point Meeting

1 Press the DISCONNECT (☎) button on the Remote Commander.

The screen changes to the four-split screen, and the DISCONNECT menu appears on the monitor screen.



2 **To disconnect a selected terminal**
Select the number to be disconnected with one of the number buttons.

The selected terminal is disconnected.

To disconnect all the terminals
Press the DISCONNECT (☎) button on the Remote Commander again.

All the terminals are disconnected.

To cancel the disconnection

Press the CANCEL button on the Remote Commander.

Notes on Secondary Terminals

If the terminal that is not adequate for the setting on this system is connected, this terminal is called as the secondary terminal.
When the secondary terminal is connected, some of the function is limited as follows:

When a normal phone is connected

You can connect only one normal audio phone in the network. If two phones try to connect, the system will disconnect its line or reject the call.
The audio mode of the other terminals is not influenced:

- Once a phone is connected.
- After the normal phone ends a meeting.

When the slave terminals via 1B-channel and 2B-channel are mixed when NUMBER OF LINES is set to 2B

Holds a meeting via 2B-channel with the 2B-channel terminals and via 1B-channel with the 1B-channel terminals. The meeting with the 1B-channel terminals is as follows:

- Send/receive the audio.
- Receive the video.

If 2B-channel terminals end a meeting, and only 1B-channel terminals are in the network, the meeting holds via 1B-channel. This 1B-channel meeting can send/receive the audio and video.

When holding a meeting in the 64 K network, the 56 K terminal is connected

The system automatically changes the transfer rate to 56 Kbps. The slave terminal that cannot change the rate becomes the secondary terminal.
The meeting with the secondary terminal is as follows:

- Send/receive the audio.
- Receive the video.

When the different audio mode terminal is connected, and the video mode is different

The system automatically changes the video rate to the lowest one. The slave terminal that cannot change the video rate becomes the secondary terminal.
The meeting with the secondary terminal is as follows:

- Send/receive the audio.
- Receive the video.

When the terminal whose video rate is lower is connected

Broadcasts the picture to all the terminals with the lowest frame rate in the network.

When the terminal whose video mode is only QCIF is connected

Does not broadcast the picture to the QCIF terminal.

The Attribute

Number	Attribute	Value
1	Maximum number of terminals that can be connected to a single MCU	3 (4 when including this terminal)
2	Maximum number of concurrent (independent) conferences that can be supported in a single MCU	1
3	Maximum number of ports that can be connected to other MCUs	0
4.1	Network interfaces at each port	BRI
4.2	Restricted network capability	Restrict_Required
5	Transfer rates available at each port	2B, 1B
6	Audio Processor	Equipped
6.1	mixed/switched noise/echo suppression on "silent" ports	Mixed No
6.2	audio algorithm at each port	G.711, G7.28, G.722
7	Video Processor (moving pictures)	Equipped
7.1	switched/mixed	Voice activate/four-split/user control
7.2	video algorithm at each port	H.261
8	Data Processor	No
8.1	data broadcast facility, LSD data broadcast facility, HSD	No No
8.2	MLP Processor	No
9	Encryption	Not support
10	Method of choosing Selected Comm Mode - SCM	Set with users: ISDN rate (1B/2B), audio (G.711/G.722/G.728) Fix: Video (H.261) Auto: Video frame rate (7.5/10/15 fps), video encoding mode (CIF/QCIF) ISDN transfer rate can be select from 56 Kbps or automatic with users.
11	Can deal with secondary terminals	Audio: send/receive Video: receive
12	Call set-up provision(s)	No call/receive reservation
13	Control capabilities	–
13.1	Numbering of terminals Simple chair control using BAS	No No
13.2	MLP facilities [refer to ITU-T T series]	No No
13.3	H.224 (simplex data)	No

The Attribute

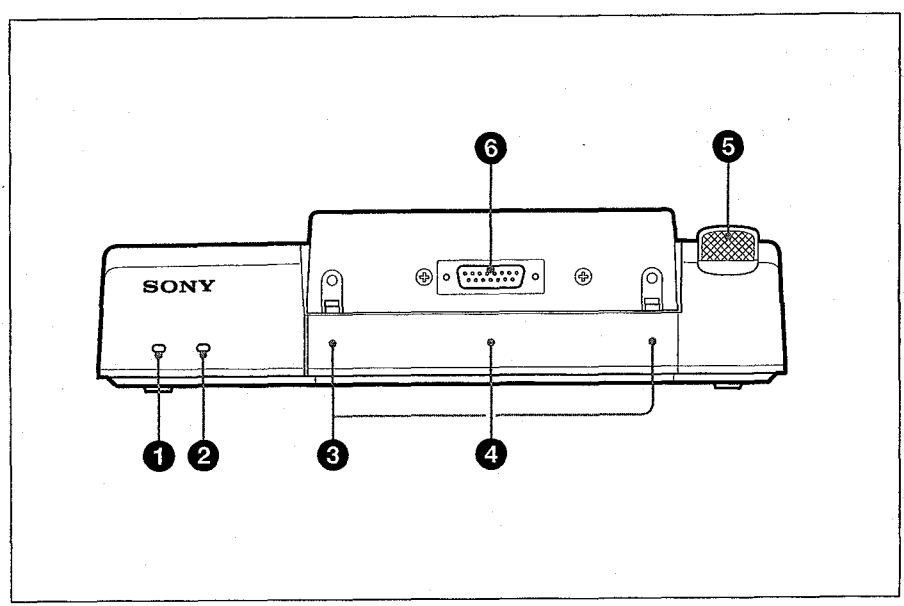
Number	Attribute	Value
14	Cascading	No
14.1	Fixed rates ("simple")	No
14.2	Master/Slave	No
15	Terminal identification	No
16	MBE capability Register necessary information such as the telephone number and index number.	No

Appendix

Location and Function of Parts and Controls

Compact Processor

Main unit (front)



(Continued)

❶ POWER lamp (green)
When you set the POWER switch to on, this lamp lights up. This lamp goes off when the system is on standby, or flashes when the system is in sleep mode.

❷ STANDBY lamp (orange)
This lamp lights up when the system is on standby. This lamp goes off when the system is in sleep mode.

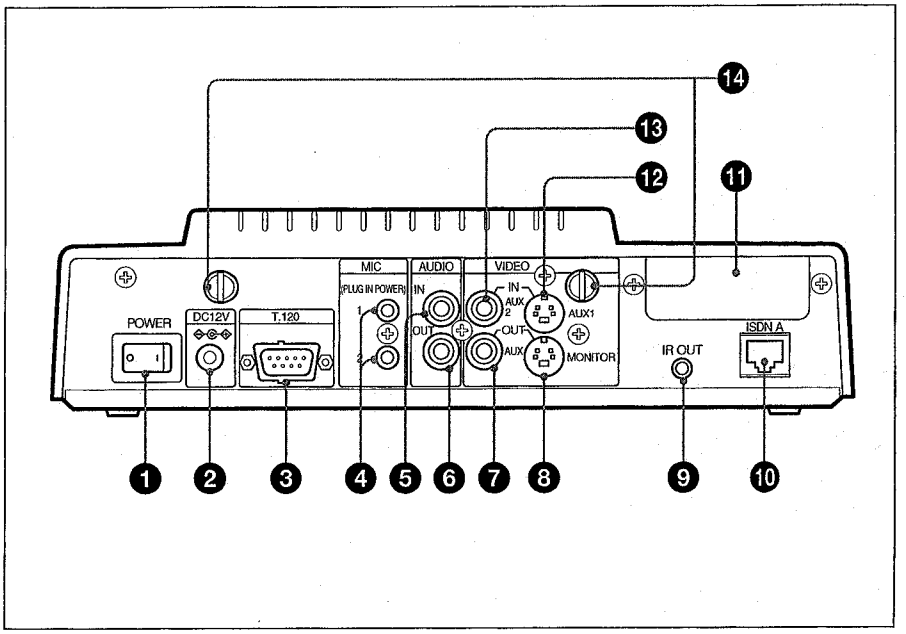
❸ IR (Infrared) sensor
Detects the infrared video signal emitted from the optional PCS-DS150/DS150P Document Stand. The infrared video input via this sensor is assigned as OBJECT.

❹ Remote sensor
When operating the Compact Processor with the Remote Commander, point it toward this sensor.
If you use this sensor, set IR RECEIVER to Body in the Other Setup (System Configuration) menu. This is set to Main Camera at factory.

❺ Microphone

❻ CAMERA connector
Connect to the camera.

Main unit (rear)



❶ POWER switch
Switch the Compact Processor to on.

❷ DC 12V IN jack
Connect the supplied PCS-AC15 AC adaptor to this jack.

❸ T.120 connector (D-sub 9-pin, male)
Connect an RS-232C device for data input/output.

❹ MIC1/MIC2 jacks/PLUG IN POWER (phono jack)
Connect the optional PCS-A300 Microphone(s) to these jacks. These provide the power supply to the microphone(s) connected to these jacks.

❺ AUDIO IN jack (phono jack)
Connect to the audio output jack of the external equipment.

❻ AUDIO OUT jack (phono jack)
Connect to the audio input jack of the TV monitor.

❼ VIDEO AUX OUT jack (phono jack)
Connect to the video input jack of the external equipment.

❽ VIDEO MONITOR OUT jack (mini DIN 4-pin)
Connect to the video input jack of the TV monitor.

(Continued)

❾ IR OUT jack (minijack)
Connect the supplied IR repeater to this jack.

❿ ISDN A jack (8-pin modular)
Connect the ISDN line to this jack using the ISDN modular cable.

⓫ Interface board slot
Install the optional board into this slot.

⓬ VIDEO IN AUX 1 jack (mini DIN 4-pin)
Connect to the video output jack of the external equipment.

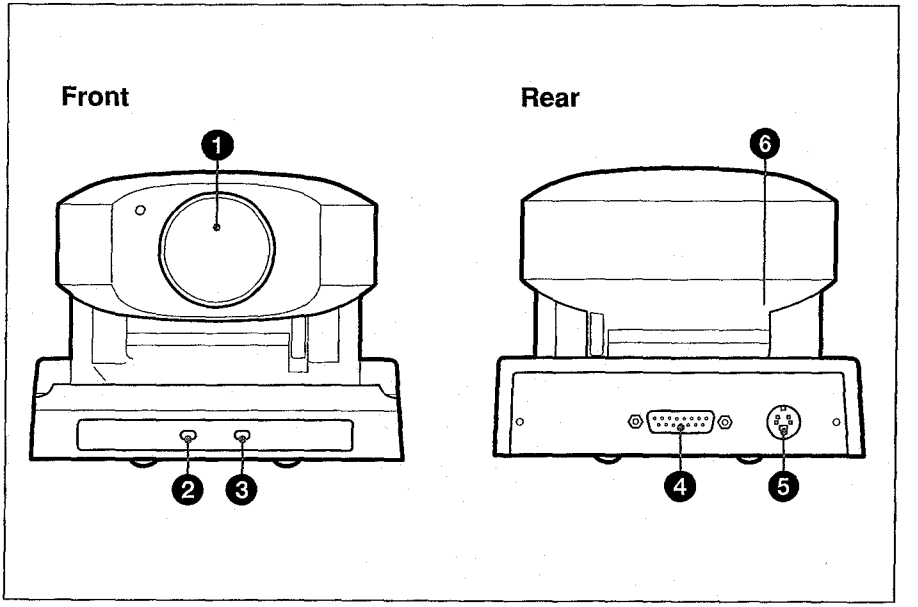
⓭ VIDEO IN AUX 2 jack (phonojack)
Connect to the video output jack of the external equipment.

⓮ Camera screws
Loosen these screws to detach the camera from the main unit.

Note

Tighten the camera screws firmly. If the screws are loose, the camera may fall down, and it causes personal injury.

Camera



1 Lens

2 POWER lamp (green)
When you set the POWER switch to on, this lamp lights up. This lamp goes off when the system is on standby.

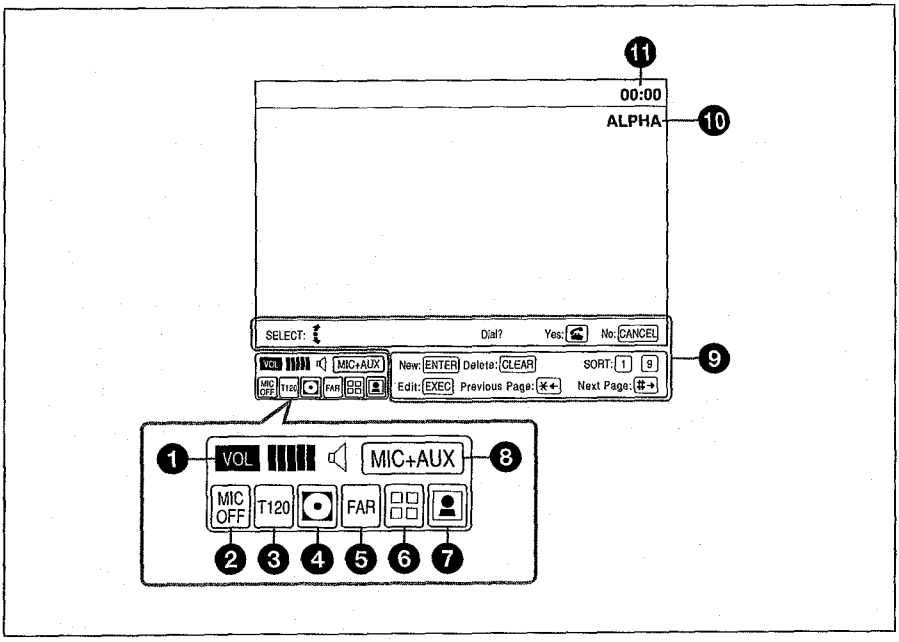
3 Remote sensor
When operating the Compact Processor, point it toward this sensor. Normally, use this sensor for operation.

4 PROCESSOR connector
Connect to the main unit.

5 VISCA OUT connector
This is deactivated in this system.

6 BACKUP switch
Set it to ON to store the presets.

The Indications on the Screen



❶ VOL (volume) bar

❷ Mute indication

❸ T.120 indication

❹ Auto target tracking indication

❺ FAR indication

❻ Broadcasting indication

❼ Still picture indication

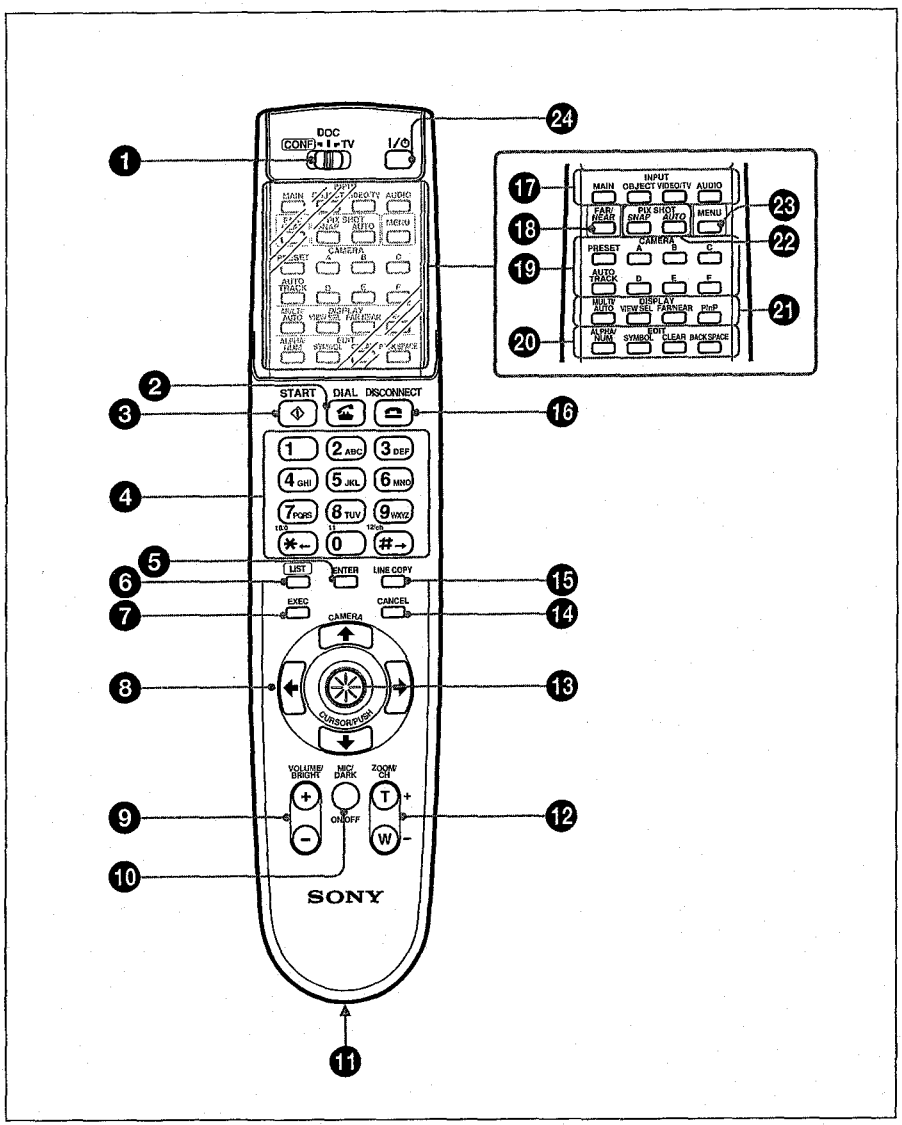
❽ Audio and video input indication/camera control indication

❾ Guide menu

❿ Input mode indication

⓫ Elapsed time

Remote Commander



(Continued)

When you press the buttons on the Remote Commander, you can hear the beep from the Compact Processor. If you do not need to hear the beep, you can mute the beep in the menu setting.

For details, see "Audio Configuration menu" on page 84.

Note

When you operate the Compact Processor, set the CONF/DOC/TV selector to "CONF."

❶ CONF/DOC/TV selector
Selects the equipment to operate.
CONF: Operates the Compact Processor.
DOC: Operates the optional PCS-DS150/DS150P Document Stand.
TV: Operates a Sony TV.

❷ DIAL (☎) button
Press this button to display the Manual Dial menu.

❸ START (◈) button
Press this button to display the Dial List menu.

❹ Number (0 – 9, #, *) buttons
Press these buttons to input characters, such as a telephone number, sub-address, or a name.

❺ ENTER button
Press this button to register a new entries in the List Input menu.

❻ LIST button
Displays the Dial List menu.

❼ EXEC button
Press to execute the setup.

❽ CAMERA control (↑/↓/←/→) buttons
These buttons adjust the camera angle.

❾ VOLUME/BRIGHT (+/–) buttons
These buttons adjust the volume.
+: press to increase the volume.
–: press to decrease the volume.

❿ MIC/DARK (ON/OFF) button
This button mutes the sounds of the local party. Press again to cancel the muting.

Note

The name of the button has the word DARK, however, this does not function in this system.

⓫ Battery compartment
Insert two size AA (LR6) alkaline batteries.

⓬ ZOOM/CH (T+/W–) buttons
These buttons control the zoom of the camera.
T+: press to zoom in the picture.
W–: press to zoom out the picture.

⓭ Joy stick
Use the joy stick to select the menu or an item.

⓮ CANCEL button
Press this button to cancel the setting.

⓯ LINE COPY button
Press this button to copy the number.

⓰ DISCONNECT (☎) button
Disconnects the connection.

⑰ INPUT SELECT buttons
Selects the input.
MAIN: Selects the camera of the Compact Processor.
OBJECT: Selects the infrared video input via the IR sensor.
VIDEO/TV: Selects the video input.
AUDIO: Selects the audio input.

⑱ FAR/NEAR button
Selects the camera to be adjusted.

⑲ CAMERA buttons
Operates the camera.
PRESET: Used to preset the camera adjustment settings with the A–F buttons.
AUTO TRACK: Displays the Auto Tracking menu.
A–F: Used to preset or recall the setting.

⑳ EDIT buttons
ALPHA/NUM: Switches the character input mode.
SYMBOL: Enters special characters.
CLEAR: Deletes an entry.
BACK SPACE: Deletes the last input character.

㉑ DISPLAY buttons
MULTI/AUTO: Displays the Chair Control menu.
VIEW SEL: Selects the terminal to be displayed .
FAR/NEAR: Switches the picture between local and remote.
PinP: Displays the inset window.

When holding a point to multi-point meeting with the unit upgraded, these buttons function as follows:
MULTI/AUTO: Switches the broadcast mode.
VIEW SEL: Selects the terminal to be broadcast.
FAR/NEAR: Displays the local picture temporarily in VOICE ACTIVATE mode.

㉒ PIX SHOT buttons
SNAP: Sends one still picture.
AUTO: Sends still pictures continuously.

㉓ MENU button
Displays the Menu (System Configuration) menu on the monitor screen.

㉔ I/⏻ button
Press this button to turn into standby when the system is turned on; to turn on the system when the system is on standby.

To operate a Sony TV monitor

Note
When you operate a Sony TV, set the CONF/DOC/TV selector to "TV."

❾ VOLUME/BRIGHT (+/–) buttons
These buttons adjust the volume.
+: press to increase the volume.
–: press to decrease the volume.

(Continued)

⑫ ZOOM/CH (T+/W–) buttons
These buttons select the channel of the TV monitor.
T+: Tunes to the upper channel.
W–: Tunes to the lower channel.

⑰ INPUT SELECT button
Selects the input of the TV monitor.
VIDEO/TV: Switches the input of the TV monitor.

㉔ I/⏻ button
Turns on/off the TV monitor when using an NTSC type TV monitor.
Turns off the TV monitor when using a PAL type TV monitor.

On Screen Messages

The following messages appear on the TV monitor when using the Compact Processor and gives instructions on dealing with them.

Message	Remedy
INCORRECT DIALING SETUP	Make sure the selected entry is correctly registered.
CANNOT COMPLETE CONNECTION (The following code and message appear.)	
0 Unknown network error:	Please try again later.
1 Number does not exist:	Please check the number and try again.
2,3,6 Network congestion:	Please try again later.
16 Normal disconnection:	(Normal disconnect)
17 Line is busy:	Please try again later.
18 System not responding:	Please check if remote system is connected.
19 No answer from user:	Please check if other party is present.
21 Call rejected by network:	Please check access restrictions remote site.
22 Called party number changed:	Please check the number and try again.
26 Non-selected user clearing:	Please try again later.
27 Remote system out of order:	Please contact remote party.
28 Invalid number entered:	Please check the number and try again.
31, 34, 41 – 44, 47 Network not available:	Please try again later.
50 Not Subscribed:	Please check the remote party's facility subscription.
57,58 Bearer capability not authorized:	Check if the line rate is set correctly.
70 Line Rate Error:	Please check if the line rate is set to correctly.
88 Incompatible equipment on remote site:	Please check if remote party has compatible system.
91, 95 – 102, 111 Local system out of order:	Restart system and try again.
128 H.221 Negotiation timeout:	Power off and power on.
131 Hardware failure.	Check the line interface boards.
132 SPID registration incompatible:	Please reregister SPID.
134 Physical Link Illegal:	Check the ISDN cable which is completely connected.
144 Bonding Negotiation timeout:	Power off and power on.

(Continued)

On Screen Messages

Message	Remedy
145 Bonding Negotiation failed:	Power off and power on.
177 LAN Connection Timeout:	Please try again later.
178 Call rejected:	Please try again later.
179 DNS ERROR:	Please check DNS.
180 Cannot call to yourself:	Please check the address and try again.
FAR END INACTIVE	The remote party operates the menu.
PLEASE CLOSE THIS MENU	Close the menu.
CANNOT ESTABLISH ALL CONNECTIONS	Check to see if your partner's telephone number is the correct one.
CONFIGURATION ERROR	Wait for a while and then try dialing again.
Command is rejected by MCU	The function is not supported for MCU if the same operation displays this message again.
CORRUPTIVE DATA STREAM. TERMINATE THE CONNECTION	A signal error occurred. The line connections are compelled to be disconnected.
PLEASE INPUT TITLE	Input an index title.
OPERATION INVALID	—
LAN CONFIGURATION ERROR (IP ADDRESS)	The IP address is not proper.
LAN CONFIGURATION ERROR (NETMASK)	The netmask is not proper.
LAN CONFIGURATION ERROR (DHCP ERROR)	The IP address and netmask cannot be got.
LAN CONFIGURATION ERROR	The setup in the LAN Setup menu is not proper.

The following messages indicate the state of the system. No action is required.

Message	Meaning
MEETING STARTS!	Connection with the remote party has been completed, the meeting can now begin.
AUTO RECEIVE CALL IN PROGRESS	The system, while in auto answer mode, has received an incoming all and is connecting to the remote party.
MEETING ENDS	Operations for ending the meeting have been completed.
PLEASE WAIT FOR SAVING	Wait for a while the data saving is completed.
SITE A (B/C) HAS DISCONNECTED	The reomte party A (B/C) has been disconnected.

Troubleshooting

If the Compact Processor does not function or functions incorrectly, check the following.

Symptom	Cause	Solution
The power is not turned on.	The POWER switch is not set to on.	Set the POWER switch to on. See page 20.
	The batteries in the Remote Commander are low or dead.	Replace the batteries with new ones. See page 17.
	The CONF/DOC/TV selector is not set to "CONF."	Set the CONF/DOC/TV selector to "CONF."
No sound or the volume is very low.	The volume is too low.	Adjust the sound volume by pressing the VOLUME/BRIGHT buttons on the Remote Commander. See page 39.
	The remote party has muted their sound.	Wait until the sound transmission from the remote party resumes.
	The MIC SELECT is not set properly.	Set up MIC SELECT properly according to the microphone to be used. See page 84.
	Audio input is not selected properly.	Select the audio input with the AUDIO button. See page 51.
Picture is blurred.	Manual focus is selected but picture remains blurred.	Adjust the focus. See page 43.
	When auto focus is selected, the background is too bright, contrast is too high, or the background or the participants' clothes contain fine line patterns.	Select manual focus and adjust manually. See page 43.
No picture.	The selected picture source is not tuned on.	Turn on the selected video equipment.
	Video input is not selected properly.	Select the video input with the INPUT buttons. See page 51.
	The selected picture source is not correctly connected to the system.	Check the connection. See page 90.
	The unit has not been connected properly to a digital line.	If you have installed an optional V.35 Board, make sure the system is connected to an ISDN outlet or a digital line outlet with the terminal adaptor. See page 87.
	A voice meeting is held.	This is not a malfunction.

Symptom	Cause	Solution
Does not connect with a remote party.	The terminal adapter is not turned on (if you have installed an optional interface board).	Turn on the terminal adapter.
	The remote party has not been registered in the system yet.	Register the remote party. See page 73.

Specifications

Compact Processor

This unit is compliant with ITU-T Recommendations H.320 and H.323.

Motion video

Operating bandwidth
- 56 Kbps to 128 Kbps (standard)
- 56 Kbps to 384 Kbps (when installing the PCS-I150)
- 64 Kbps to 768 Kbps (when installing the PCS-I152 and connecting on a LAN)

Coding
- H.261 (ITU-T Recommendation)
- H.263 (ITU-T Recommendation)

Picture elements
- CIF: 352 pixels × 288 lines
- QCIF: 176 pixels × 144 lines

Color system
- NTSC (PCS-1500)
- PAL (PCS-1500P)

Still Picture

Pixels
- 704 pixels × 480 lines (PCS-1500)
- 704 pixels × 576 lines (PCS-1500P)

Encoding
- H.261 Annex D (4CIF)

Sound

Bandwidth
- 7 kHz (G.722, ITU-T Recommendation)
- 3.4 kHz (G.711/G.723.1/G.728, ITU-T Recommendation)

Transfer rate
- 48 Kbps to 64 Kbps (G.722, ITU-T Recommendation)
- 56 Kbps to 64 Kbps (G.711, ITU-T Recommendation)
- 16 Kbps (G.728, ITU-T Recommendation)
- 6.4 Kbps (G.723.1, ITU-T Recommendation) (when installing the PCS-I152 and connecting on a LAN)

Network

Multiplexing
- Video, audio, data

Frame format
- H.221 (ITU-T Recommendation)

Interface
- ISDN (BRI) up to 1 line (or up to 3 lines when installing the PCS-I150)
- V.35 (RS-366) (when installing the PCS-I151): 56 Kbps, 64 Kbps, 56 Kbps to 384 Kbps
- LAN (when installing the PCS-I152 and connecting on a LAN): 64 Kbps to 768 Kbps

Data transfer rate
- LSD 1.2 Kbps, 4.8 Kbps, 6.4 Kbps
- MLP 6.4 Kbps, 24 Kbps, 32 Kbps
- HMLP 62.4 Kbps, 64 Kbps

Microphone

Bandwidth 7.0 kHz

Remote control

Far end camera control
H.281 (ITU-T Recommendation)
Data transfer
T.120 (ITU-T Recommendation)

Camera

Video signal
NTSC color, EIA standards (PCS-1500)
PAL colour, CCIR standards (PCS-1500P)
Image device
1/3-inch CCD (Charge Coupled Device)
Approx. 410,000 pixels (Effective: approx. 380,000 pixels) (PCS-1500)
Approx. 470,000 pixels (Effective: approx. 440,000 pixels) (PCS-1500P)
Lens f = 5.4 to 64.8 mm, F 1.8 to 2.7, Horizontal angle 4.4° to 48.8°
Focal distance
10 to 800 mm
Minimum illumination
7 lux at F 1.8/50 IRE
Illumination range
7 lux to 100,000 lux
Horizontal resolution
460 TV lines (PCS-1500)
450 TV lines (PCS-1500P)
Pan/tilt action
Horizontal ±100°
Vertical ±25°

General

Power consumption
12V, 2 A
Operating temperature
5°C to 35°C (41°F to 94°F)
Operating humidity
20% to 80%
Storage temperature
–20°C to +60°C (–4°F to +140°F)
Storage humidity
20% to 80% (no condensation)
Dimensions 258 × 134 × 216 mm (w/h/d) (10 1/4 × 5 3/8 × 8 5/8 inches) excluding protruding parts
Mass Approx. 2.5 kg (5 lb 8 oz)
Supplied accessories
Remote Commander (1)
Size AA (LR6) alkaline batteries for Remote Commander (2)
IR repeater (1)
S-video connecting cord (1.3 m, 4.3 ft) (1)
Audio connecting cable (1 m, 3.3 ft) (1)
ISDN modular cable (5 m, 16.4 ft) (1)
AC adaptor (1)
Power cord (1)
21-pin adaptor (1) (PCS-1500P only)
Velcro (long) (2)
Velcro (short) (3) (These are not used with the system.)
Operating instructions (1)

Remote Commander (PCS-R150)

Signal format
Infrared SIRCS
Control DC 3V using two size AA (LR6) alkaline batteries
Dimensions 50 × 35 × 239 mm (w/h/d) (2 × 1 7/16 × 9 1/2 inches)
Mass Approx. 180 g (6 oz) (including batteries)

AC Adaptor (PCS-AC15)

Power requirements
100 to 240V AC, 50/60 Hz
Power consumption
Approx. 1.0A to 0.6A
Operating temperature
5°C to 35°C (41°F to 94°F)
Operating humidity
20% to 80%
Storage temperature
–20°C to +60°C (–4°F to +140°F)
Storage humidity
20% to 80% (no condensation)
Dimensions 93 × 34 × 165 mm (w/h/d) (3 3/4 × 1 3/8 × 6 1/2 inches)
Mass Approx. 470 g (1 lb 1 oz)

Optional microphone PCS-A300

Bandwidth 7.0 kHz
Dimensions 68 × 15 × 90 mm (w/h/d) (2 3/4 × 19/32 × 3 5/8 inches)
Mass Approx. 200 g (7 lb 1 oz)
Power Plug in power

Upgrade Kit PCS-UC150

Dimensions 85.6 × 54.0 × 3.3 mm (w/h/d) (3 1/2 × 2 1/4 × 5/32 inches)
Mass Approx. 30 g (1 oz)
Supplied accessories
Serial number sticker (1)
Operating instructions (1)

Design and specifications are subject to change without notice.

Pin Assignment

T.120 connector (male)

D-sub 9-pin connector

Pin	Signal	Description
1	DCD	Carrier detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Send Ready
9	RI	Call

AUX1 IN/MONITOR OUT jacks

Mini-DIN 4-pin jack

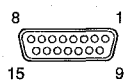
Pin	Signal	Description
1	AGND	Analog Ground
2	AGND	Analog Ground
3	Y	Brightness Signal
4	C	Chrominance Signal

ISDN A jack

Modular jack

Pin	Signal	Description
1	NC	
2	NC	
3	TA	Transmit+
4	RA	Receive+
5	RB	Receive–
6	TB	Transmit–
7	NC	
8	NC	

CAMERA connector (female)

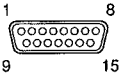


D-sub 15-pin

Pin	Signal	Description
1	Y	Brightness signal
2	Y.GND	Brightness signal ground
3	C	Chrominance signal
4	C.GND	Chrominance signal ground
5	GND	Ground
6	GND	Ground
7	TxD	Transmit data
8	RxD	Receive data
9	12V	12V
10	12V	12V
11	GND	Ground

12	SIRCS	Remote control data
13	DTR	Data terminal ready
14	Lock	Lock
15	GND	Ground

PROCESSOR connector (male)



D-sub 15-pin

Pin	Signal	Description
1	Y	Brightness signal
2	Y.GND	Brightness signal ground
3	C	Chrominance signal
4	C.GND	Chrominance signal ground
5	GND	Ground
6	GND	Ground
7	RxD	Receive data
8	TxD	Transmit data
9	12V	12V
10	12V	12V
11	GND	Ground
12	SIRCS	Remote control data
13	DTR	Data terminal ready
14	GND	Ground
15	GND	Ground

Pin Assignment on Optional Board Connectors

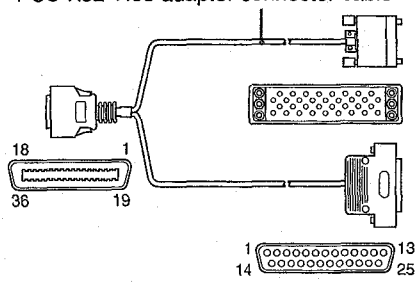
ISDN B/C jacks (PCS-I150)

Modular jack

Pin	Signal	Description
1	NC	
2	NC	
3	TA	Transmit+
4	RA	Receive+
5	RB	Receive–
6	TB	Transmit–
7	NC	
8	NC	

V.35 connector (female) (PCS-I151)

PCS-K32 V.35 adapter connector cable

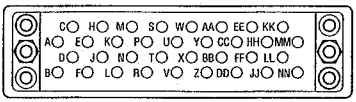


Half-pitch 36-pin connector

Pin	Signal	Description
1	SGND	Signal ground
2	SGND	Signal ground
3	CABLE1	Cable1
4	V35SD+	Send data+
5	V35SD–	Send data–
6	V35RD+	Receive data+
7	V35RD–	Receive data–
8	V35ER	Data terminal ready
9	V35RS	Request to send
10	V35ST+	Transmit Timing+
11	V35ST–	Transmit Timing–
12	V35RT+	Receive Timing+
13	V35RT–	Receive Timing–
14	V35TT+	Send Timing+
15	V35TT–	Send Timing–
16	SGND	Signal ground
17	SGND	Signal ground
18	SGND	Signal ground
19	SGND	Signal ground
20	SGND	Signal ground
21	CABLE2	Cable2
22	V35RI	Call Indication
23	V35DR	Data set ready
24	366DLO	Data line occupied
25	V35CS	Ready to send
26	366ACR	Abandon call
27	366DPR	Number display
28	366CRQ	Call request
29	366PND	Next no. request
30	366NB1	Numerical signal #1 bit
31	366NB2	Numerical signal #2 bit
32	366NB4	Numerical signal #4 bit
33	366NB8	Numerical signal #8 bit
34	SGND	Signal ground
35	SGND	Signal ground
36	SGND	Signal ground

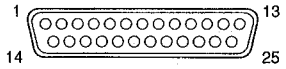
(Continued)

CCITT V.35 connector (cable side)



Pin	Signal	Description
A	CGND	Chassis ground
B	SGND	Signal ground
C	V35RS	Request to send
D	V35CS	Clear to send
E	V35DR	Data ready
H	V35ER	Data terminal ready
J	V35RI	Call diaplay
P	V35SD+	Send data+
R	V35RD+	Receive data+
S	V35SD–	Send data–
T	V35RD–	Receive data–
U	V35TT+	Transmit timing+
V	V35RT+	Receive timing+
W	V35TT–	Transmit timing–
X	V35RT–	Receive timing–
Y	V35ST+	Send timing+
AA	V35ST–	Send timing–

D-sub 25-pin connector (cable side)



Pin	Signal	Description
1	SGND	Signal ground
2	366DPR	Number display
3	366ACR	Abandon call
4	366CRQ	Call request
5	366PND	Present next digit
7	SGND	Signal ground
14	366NB1	Numerical signal 0 bit
15	366NB2	Numerical signal 1 bit
16	366NB4	Numerical signal 2 bit
17	366NB8	Numerical signal 3 bit
18	366RC	Receive common
19	SGND	Signal ground
22	366DLO	Data line occupied

10 BASE-T jack (PCS-I152)

Modular jack

Pin	Signal	Description
1	TPOP	Transmit+
2	TPON	Transmit–
3	TPIN	Receive+
4	NC	—
5	NC	—
6	TPIN	Receive–
7	NC	—
8	NC	—

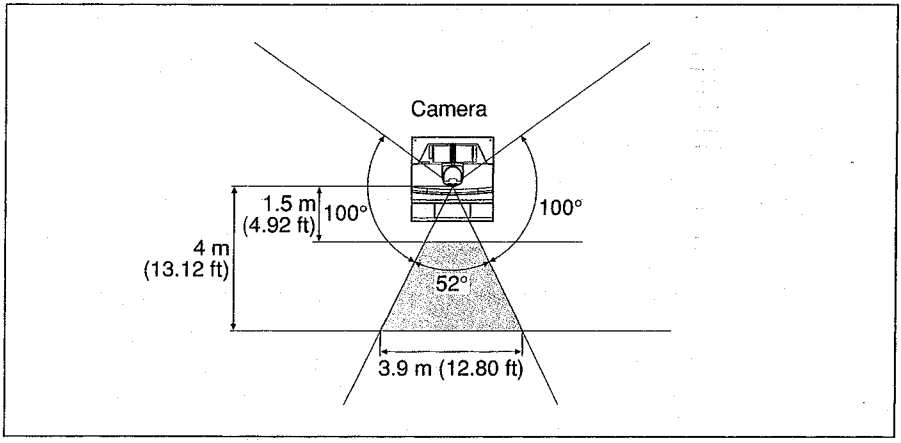
Videomeeting Room Layout

Be sure to position camera and microphone appropriately in your videomeeting room.

Camera Range

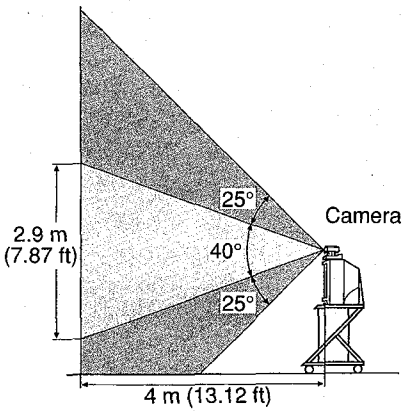
represents the scope of the camera when the zoom has been extended fully. indicates the scope of the camera when the left/right angling function is fully utilized. Use the measurements below as a guide for the layout of your videomeeting room.

Top view (horizontal range at maximum zoom-out)



Videomeeting Room Layout

Side view (vertical range at maximum zoom-out)

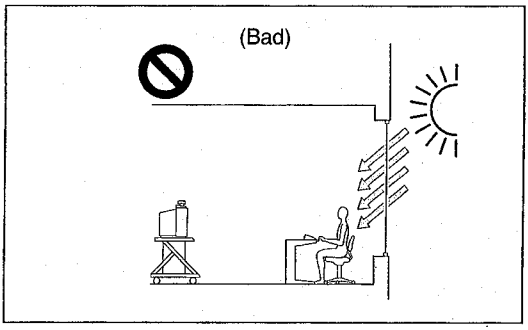


Layout Considerations

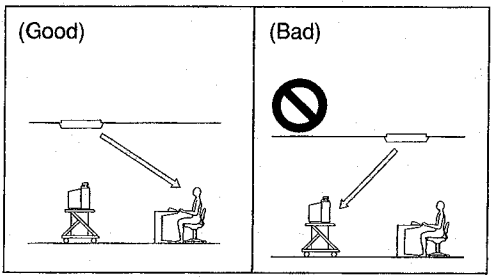
- Avoid allowing large, moving objects, especially people behind the participants; the quality of the local transmission will deteriorate.
- Do not seat participants with fine line patterns in front of a wall.
- Choose a place which is echo-free.
- Do not install the system near noise sources such as air conditioners or copy machines.
- Avoid placing the system in a room where there are speakers used for an in-house broadcasting system.

Lighting Considerations

Do not point the camera towards a window as back lighting may wash out the contrast. Cover any windows with a thick curtain.



Adjust room lighting so that it falls on the participants. Avoid direct light on the TV monitor. Light intensity on faces should be about 300 lux or more.



If an inverter type or brightness-adjustable type of fluorescent lamp is used, the sensitivity of the Remote Commander may deteriorate.

Glossary

Bonding
An abbreviation for Bandwidth on Demand Interoperability.

BRI
An abbreviation for Basic Rate Interface. Single ISDN has two B-channels and one D-channel.

CIF
An abbreviation for Common Intermediate Format. This format allows to communicate with between different color systems (NTSC or PAL).
352 pixels × 288 lines

Codec
An abbreviation for Coder-Decoder. An electronic device that converts an analog signal (such as voice or video) to a digital data stream, compresses it, and sends it over a digital communications line. Another codec reverses the process at the receiving end.

DHCP
An abbreviation for Dynamic Host Configuration Protocol. Manages IP addresses in the network.

DNS
An abbreviation for Domain Name System.

Echo
Reflection of sound from walls and other surrounding objects.

Frame rate
The number of frames which can be encoded/ decoded in one second.

G.711
Pulse code modulation (PCM) of voice frequencies.

G.722
7 kHz audio-coding within 64 Kbps.

G.723.1
5.3 or 6.3 kHz audio-coding within 32 Kbps.

G.728
Coding of speech at 16 Kbps using low-delay code excited linear prediction.

H.221
Frame structure for a 64 to 1920 Kbps channel in audiovisual teleservices.

H.261
Video codec for audiovisual services as p × 64 Kbps.

H.263
This is basically based on H.261, however, this enables communication using via a lower bit rate.

H.320
Narrow-band visual telephone systems and terminal equipment.

H.323
This enables communications with the H.320 terminal on the non-QOS (Quality of Service) LAN.

Interface
A device that goes between two different devices so that they can communicate with each other.

I-MUX
An abbreviation for Inverse Multiplexer. This protocol allows you to transmit the data at 384 Kbps via 6B-channel.

ISDN
An acronym for Integrated Services Digital Network. This is a communications protocol by CCITT on transmission of integrated voice, video, and data. Bandwidths include basic (64 Kbps) and primary rate (1.544 and 2.048 Mbps).

ITU-T
An abbreviation for International Telecommunication Union, Telecommunications.

Lip synchronization
A function that synchronizes sound with motion. Sound processing is much faster than motion processing, thus sound and motion sometimes get out of step with each other.

MCU
An abbreviation for Multipoint Control Unit. When connecting a MCU, a multipoints meeting can be held.

PBX
An abbreviation for Private Branch eXchange.

P in P
An abbreviation for "Picture in Picture." This is a function which allows the user, to monitor their own party on a small window on the TV monitor.

QCIF
An abbreviation for Quater CIF. The number of pixels is a quarter than one of CIF format.
176 pixels × 144 lines

SPID
An abbreviation for Service Profile ID.

Still picture
Still, unmoving pictures, as in a photograph.

Sub-address
An identification number given to devices sharing a common ISDN line .

Terminal adaptor
A device used to connect various equipment to a digital line. The device sits between the equipment and the digital line and checks that signals are correctly sent or received.

V.35
This interface is frequently used for data communication since this transmits data at high speed.

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